

State of Connecticut

Strategic Plan

for

Traffic Records

2015 - 2016



CT-TRCC

Connecticut - Traffic Records Coordinating Committee

2015 - 2016 Traffic Records Strategic Plan

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Introduction

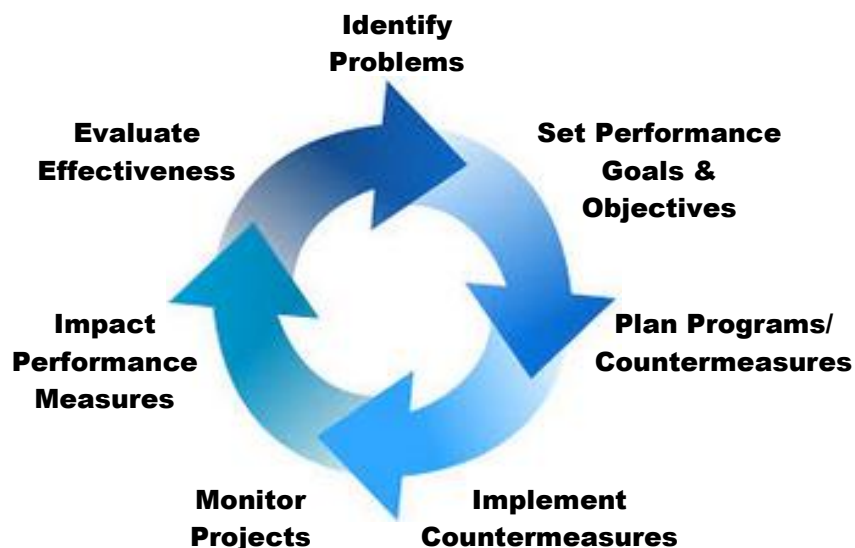
The phrase “data-driven” means that progress in an activity is compelled by data, rather than by intuition or personal experience. A management approach to highway traffic safety requires data that is timely, complete, accurate, uniform, integrated and accessible (a comprehensive traffic records system). A data-driven approach to reducing traffic fatalities and injuries focuses on many aspects of the highway traffic safety challenge:

workzone safety
multi-tasking and driving
speeding
motorcycle safety
school bus safety
bicycle safety
cell phones and texting
drunk driving
teenage drivers
commercial vehicles
rural roadways
poor driving conditions
driverless motor vehicles
defective traffic control devices
air bag deployment
emergency medical services
rear-end crashes
single vehicle crashes

distracted driving
child passenger safety
occupant protection/ejection
safe routes to school
pedestrian safety
aggressive driving
drug impaired driving
driver behavior
mature drivers
defective vehicles
Intersections
emergency vehicles en route
vehicles driving the wrong way
hazardous material cargo
drinking and driving
right of way crashes
head-on crashes
etc.

Quality data is essential in the ever evolving need to diagnose the contributing factors to motor vehicle crashes and assessment of implemented countermeasures. The data assists in the identification of innovative and targeted strategies in areas that will have the greatest impact on achieving our goals.

Management Approach to Highway Traffic Safety

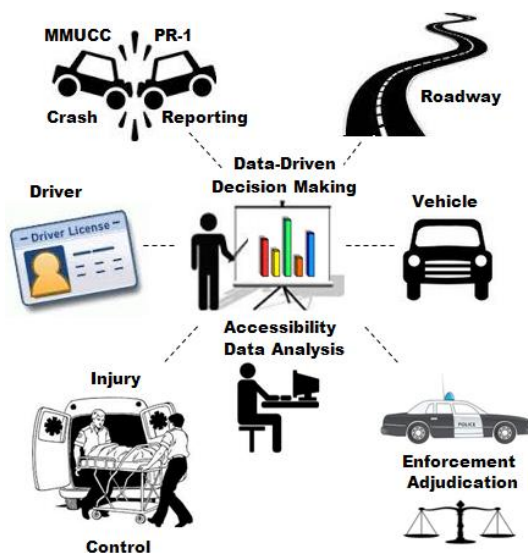


Data collected at the local level serves as the foundation for a state traffic records system. A car is registered; a driver license issued; traffic volume recorded; a motor vehicle crashes; or an officer issues a traffic citation, warning or summons arrest; are all examples of safety related data being generated as part of an administrative function that also serves a safety purpose. This dual administrative and safety function of highway traffic safety data makes a traffic records system unique. Although the data are collected by different agencies for different administrative purposes, they are all related to highway traffic safety. Thus, the traffic records system has the capability to serve as an information resource for highway traffic safety professionals to identify traffic safety problems, select countermeasures, manage those countermeasure programs, and evaluate the performance of these programs.

Changes are occurring in all phases of Connecticut's traffic records system. While still a work in progress, the current focus is to direct more of the time spent by law enforcement and emergency medical services (EMS) professionals to helping injured people, securing an incident location, and traffic flow, and less on the dependence on paper reporting; ultimately resulting in officer/EMS responder safety, and better service to the public.

Stakeholders of Connecticut's system continue to make great strides in their push to achieve system wide electronic reporting. Emphasis on EMS patient care reporting resulted in nearly all EMS providers in the state achieving electronic reporting, using the National Standard (¹NEMSIS) in 2010. The focus the past few years has been on electronic reporting for a motor vehicle crash as well as traffic citation. Crash reporting is advancing with the adoption of the National ²MMUCC Guideline, which began on January 1, 2015. Electronic reporting of traffic citations has hit the 50 percent mark for all traffic citations issued statewide.

Components of Connecticut's Traffic Records System



Complementing these developments, the Crash Data Repository (CDR) at the University of Connecticut (UConn), now boasts over 725 registered users, with access to crash, roadway and traffic volume data. The CDR is a component of the Transportation Safety Research Center (TSRC), supported by the State Department of Transportation (ConnDOT). Users of the CDR have been satisfied with benefits they've received from online access and data query tools, the number of years of data already contained on the repository and the ability to use linked crash and roadway data and to generate rates based on traffic volume.

Connecticut's core of its traffic records system includes **crash, driver licensing, roadway, injury control, vehicle registration and enforcement/adjudication**. The TSRC at UConn provides the opportunity for linking many of these components in the future within the CDR. For a previous Section 405c application, the State used "linkage" to anchor its performance measure requirement. The TSRC linked records in the crash database (using route and milepost) for State, Interstate and U.S. Routes, with roadway and traffic volume data from the ConnDOT Roadway Inventory System (RIS). Access to this linked data, representing 580,000 crash/roadway/traffic volume records over nine years, was made available, and one of the early applications was a ConnDOT Engineering High Risk Rural Road Signing project, made possible as a result of the linked data.

Acknowledging significant gains in the State's traffic records system, many opportunities remain for improving core data systems. The TRCC continues to place a high priority on integrating performance measures with any new proposed system improvements.

Performance measures for 2015-2016 include **crash uniformity** (number of MMUCC compliant data elements entered into the crash database), **crash accessibility**, and **crash linkage** (principal users of the CDR), and **citation timeliness** (days from the issuance of a citation to database entry into the repository at Judicial). EMS patient care linkage (tracking patients from the point of injury to hospital discharge), assessing patient outcome in terms of mortality, injury severity, and health care cost is projected for 2016-2017.

The TRCC has helped to coordinate efforts with the support of the ConnDOT Highway Safety Office to ensure cooperation with the State's political subdivisions establishing and implementing a complete and comprehensive traffic records program. The TRCC maintained an active schedule in 2014, and continues in 2015, meeting monthly as a technical advisory committee and interacting with working groups on the e-Crash, e-Citation, e-Health/Injury Control linkage and related TSRC/CDR efforts.

TRCC representatives have been active in recent National Traffic Records Forums, discussing the development and implementation of e-Citations. Plans are to again participate in this year's National Forum in late October, in Costa Mesa, California, presenting information on the development and implementation of e-Crash, in concert with the TSRC/CDR, which provides users with timely access to data queries, report summaries, and analytic tools. The TRCC has continued its efforts to focus on the development of electronic field data capture for all traffic safety events, including the back-end systems to receive and process this data.

The TRCC website, located at <http://www.ct.gov/dot/cwp/view.asp?a=2094&q=435916> contains the 2015 Traffic Records Strategic Plan for fiscal year 2016, a dynamic link to the electronic crash data improvement (CDIP) initiative, the most recent Traffic Records Assessment conducted in 2012, and continually updated content from the most recent meetings of the TRCC.

Achieving maximum results in highway traffic safety by reducing motor vehicle crashes, deaths and injuries through highway safety improvements, requires 1) a comprehensive traffic records system, 2) a long-range traffic records strategic plan; and 3) a dedicated TRCC, supported by the State Highway Safety Office.

Included in this plan are the deficiencies in the State's traffic records system together with information concerning how additional funding could be used to address identified deficiencies.

Safety Data Project Funding

2012 – 2013 Projects

Project funding for 7th year 2012 Section 408 application:

• Electronic Crash Reporting Using National Standards (E-Crash)	75,000
• Crash Data Repository (CDR)	200,000
• Electronic Citation Processing System (E-Citation)	75,000
• E-Citation Pilots - State Law Enforcement	100,000
• E-Citation Pilots - Local Law Enforcement	50,000
Total 408 funding for traffic records improvements	500,000

With the shortened time frame to propose, discuss and determine projects for the 2013 - 2014 fiscal year, TRCC stakeholders used the months of December 2012, January and February 2013, together with follow-up communication, using both the TRCC website and e-mail and phone to submit the list of projects for the 8th year application, 2013 – 2014 Section 405 safety data improvements.

2013 – 2014 Projects

Project funding (targeting E-Crash and E-Citation) for the 8th year 2013 Section 405 application.

• Electronic Crash Reporting Using National Standards (E-Crash)	150,000
• E-Crash / 100% Statewide Submission / Assessment and Support	300,000
• E-Citation Processing System / 100% Statewide Submission / Assessment and Support	150,000
• E-Citation Pilots - State Law Enforcement (DPS)	100,000
• E-Citation Pilots - Local Law Enforcement (CRCOG)	50,000
• E-Citation Pilots - Local Law Enforcement (DPS Application)	50,000
Targeted Section 405 funding request for traffic records improvements	800,000

2014 – 2015 Projects

Project funding (targeting Electronic Crash / Citation Processing / Single Charging, and Injury Outcome Data Linkage) for the 9th fiscal year 2014-2015 Section 405c application.

• Electronic Crash Reporting / National Standards	150,000
• Electronic Crash / Citation Reporting – Local Law Enforcement Agencies	400,000
• Electronic Citation / Summons Arrest / Warning Processing	200,000
• Electronic Charging / Citation / Warning / Summons Arrest	150,000
• Electronic EMS Tracking and Reporting System Data Linkage	100,000
Targeted Section 405c funding request for traffic records improvements	1,000,000

2015 – 2016 Projects

Project funding (targeting Electronic Crash / Electronic Charging / Processing - Citation / Warning / Summons Arrest, Crash Injury Outcome / EMS Linking - Tracking) for the 10th fiscal year 2015-2016 Section 405c application.

• Electronic Crash - Technology/Software Support for Local Law Enforcement	350,000
• Electronic Citation - Complete Installation Statewide for all Local Law Enforcement	150,000
• Electronic Charging - Citation/Warning/Summons Arrest	150,000
• Electronic Processing - Citation/Warning/Summons Arrest	150,000
• Linking Crash/Injury Datasets - Measure Injury Outcomes Assessed by Health Care Providers	50,000
• Crash Data Repository (CDR) - Expand Functionality/Query Tools/Canned Output Reports	150,000
• Electronic EMS - Basis for Tracking and Reporting System	100,000
Targeted Section 405c funding request for traffic records improvements	1,100,000

Program Level Information

State Transportation Safety Data System Contact: Point of contact for questions related to the Strategic Plan or other traffic records-related issues

Name: Joseph T. Cristalli, Jr.
Title: Transportation Principal Safety Program Coordinator
Agency: Connecticut Department of Transportation
Office: Highway Safety Office
Address: 2800 Berlin Turnpike
City, ZIP: Newington, CT 06131
Phone: 860-594-2412
Email: joseph.cristalli@ct.gov

Traffic Records Coordinating Committee (TRCC): The TRCC has continued to track its progress and manage safety project development by posting documents on its TRCC website, in addition to its MMUCC PR-1 Motor Vehicle Crash Review website. The links on the following pages include other websites encompassing core safety data systems relating to Highway Safety, Crash Data Repository, Motor Vehicles, Public Health, Judicial, and Law Enforcement.

DOT - <http://www.ct.gov/dot> (Department of Transportation)

Highway Safety Programs - <http://www.ct.gov/dot/cwp/view.asp?a=2094&q=432886>

- Information on Key Highway Safety Laws
- Highway Safety Plans & Reports
- Click it or Ticket Enforcement Campaign
- Child Passenger Safety
- Distracted Driving Prevention
- Crash Data Collection Initiatives and Programs (MMUCC PR-1)
- DUI Enforcement Program
- Motorcycle Safety - Connecticut Rider Education Program (CONREP)
- Police Traffic Services
- Safe Routes to School ([direct link to walkitbiketct.org](http://walkitbiketct.org))
- **Traffic Records Coordinating Committee (TRCC)**

The Highway Safety Office is represented on its own **face book** page. *While texting, your eyes are off the road for an average of 4.6 seconds. At 55 mph, that's the equivalent of driving blind for the length of a football field!*

Traffic Records Coordinating Committee - <http://www.ct.gov/dot/cwp/view.asp?a=2094&q=435916>

- Message to Stakeholders - Read This First
- TRCC Meeting
- CDIP Update
- MMUCC PR-1 Roll Call Video
- MMUCC PR-1 E-Crash
- E-Citation
- 2015 Strategic Plan
- Traffic Records Assessment 2012
- TRCC Stakeholders

Crash Data Repository - <http://www.ctcrash.uconn.edu>

The Crash Data Repository (CDR) at UConn within the Transportation Safety Research Center (TSRC), is easy to use; already has multiple years of crash data, which can be linked to roadway as well as traffic data, and can be accessed anywhere with an Internet connection. A simple registration process provides the TSRC with who the stakeholders are that are utilizing this valuable state resource. From recent survey, examples of topics people have focused on using data from the CDR.

- High crash corridors
- Pedestrian crash sites – increasing safety
- Road improvement through traffic signage
- A source of localized statistics to be able to honor police departments
- Study of congestion and motor vehicle crashes
- Study of warning signage – crashes involving animals
- Study of freeways – focusing on speed limits and geometric variables
- Crashes near a bridge replacement project
- Promotion of motorcycle helmet use

The number of registered users for the TSRC/CDR has topped 725.

Crash Data Improvement Program (CDIP) - <http://www.ct.gov/dot/crashinitiative>

The Connecticut DOT is working to address a federally recognized need to modernize the State's crash reporting system. The goal is to align Connecticut's system with national crash data guidelines, known as Model Minimum Uniform Crash Criteria Guideline (MMUCC), and to leverage efficiencies gained with electronic reporting. Check out the latest for the new MMUCC PR-1 crash reporting system – forms, brochures, instructional materials, outreach, technology planning, pilot testing, and 2015 roll-out.

Transportation Safety Research Center (TSRC) -

<https://www.facebook.com/connecticuttransportationsafetyresearchcenter>

The TSRC at UConn is now represented on its own face book page. *Each year, police officers must knock on 267 doors in the State of Connecticut to inform next-of-kin that their loved one has died in a car crash.*

DMV - <http://www.ct.gov/dmv> (Department of Motor Vehicles)

- Online Services
- Infraction Ticket Processing
- Teen Drivers
- Suspension
- Driving Under the Influence (DUI)
- Commercial Vehicles

DPH - <http://www.ct.gov/dph> (Department of Public Health)

- Connecticut Health Database Compendium
- EMS Patient Care Report Database/Trauma Centers
http://www.ct.gov/dph/cwp/view.asp?a=3127&q=387370&dphNav_GID=1827&dphNav
- Injury Prevention
<http://www.ct.gov/dph/cwp/view.asp?a=3137&q=400094>

DESPP - <http://www.ct.gov/despp> (Department of Emergency Services & Public Protection)**Division of State Police**

http://www.ct.gov/despp/cwp/view.asp?a=4201&q=494678&desppNAV_GID=2077&desppNav=|

CPCA - <http://www.cpcanet.org/> (Connecticut Police Chiefs Association)**JUD** - <http://www.jud.ct.gov/> (Judicial Branch)

- Infraction Ticket Processing
<https://www.jud2.ct.gov/cibepay/>

CJIS - www.ct.gov/cjis (Criminal Justice Information System)

- Connecticut Information Sharing System (CISS)

Authority – The Connecticut TRCC continues to operate under the authority of and by the appointment of the Administrators of the Connecticut Department of Transportation, Connecticut Department of Motor Vehicles, Connecticut Department of Public Health, and the Judicial Branch who represent the core safety data systems: Motor Vehicle Crash, Roadway, Driver License/History, Vehicle Registration, Injury Surveillance/EMS, and Citation/Adjudication.

Letters of delegation (Administrators listed below) are attached to the Section 405c application.

Letters of delegation from these Administrators designate individual(s) to attend and participate on the TRCC, as their representatives.

Crash Data System:

Name: James P. Redeker
Title: Commissioner
Agency: Department of Transportation

Driver License / History Data System:

Name: Andres Ayala, Jr.
Title: Commissioner
Agency: Department of Motor Vehicles

Injury Surveillance / EMS Data System:

Name: Jewel Mullen
Title: Commissioner
Agency: Department of Public Health

Citation / Adjudication Data System:

Name: Joseph D. D'Alesio
Title: Executive Director of Operations
Agency: Superior Court

Vehicle Registration Data System:

Name: Andres Ayala, Jr.
Title: Commissioner
Agency: Department of Motor Vehicles

Roadway Data System:

Name: James P. Redeker
Title: Commissioner
Agency: Department of Transportation

TRCC (Technical Level) – The Connecticut TRCC, supported by the Highway Safety Office, continues an active, full schedule. In its efforts to seek improvements in the State's traffic records system, as outlined in this Strategic Plan and reflected in both the 2007 and 2012 Traffic Records Assessments, the TRCC's emphasis has followed the original recommendations from the Section 408 process for measures of improvements – *completeness, uniformity, timeliness, accuracy, integration and accessibility* of the data by stakeholders.

The following vision and mission statements, reviewed during TRCC meetings in 2014 and 2015, continue to support the goals and objectives of the TRCC.

TRCC Vision

A comprehensive Traffic Records System that provides reliable Data critical to the development of policies, and programs that enhance the operation and safety of the Connecticut Highway Transportation (National, State, and Local Roads) System.

TRCC Mission

Develop and promote a comprehensive Traffic Records System that provides Timely, Accurate, Complete, Uniform, Integrated, and Accessible Traffic Records System data for management of Highway and Traffic Safety Programs.

The Connecticut TRCC shall:

- a. Include representatives from highway safety, the highway infrastructure, law enforcement, adjudication, public health, injury control and other State and federal agencies and organizations;
- b. Have authority to review the State's highway safety data and traffic records system and review changes to such systems before the changes are implemented;

- c. Provide a forum for the discussion of highway safety data and traffic records system issues and report on such discussions to the agencies and organizations in the State that manage and use highway safety and traffic records system data;
- d. Consider and coordinate views of organizations in the State that are involved in the collection, management and use of traffic records system data;
- e. Represent the interests of traffic records system agencies and organizations to outside organizations; and
- f. Review and evaluate new technologies that have potential application for improving the Timeliness, Accuracy, Completeness, Uniformity and Accessibility of Traffic Records System data.

Participants on the TRCC (2015 roster attached), which meets monthly, include 27 new stakeholders³ added this past year, while 16 members left due to changing job assignments or retirement. The TRCC is proud of its multidisciplinary membership, including collectors, managers, operators, and users of traffic records data. Representation includes public health and injury control, highway safety, highway infrastructure, law enforcement, adjudication, driver licensing, motor carrier, research, hospital, insurance, regional planning, university, mental health and other interested organizations.

Crash Data Systems – MMUCC Audit: The State continues its documentation of the National Guideline⁴ MMUCC data elements that are collected and used within the crash data system. In January 2015, the State began the transition to a completely updated electronic crash reporting system using the 4th Edition of the⁵ MMUCC Guideline as the basis for its crash data collection.

This past year, the focus of the TRCC solidified on the move to revise the State's crash reporting system based on National Guidelines; employing electronic motor vehicle crash reporting. Members of the TRCC agreed that there would always be a need for a paper back-up of the crash report form, but as stated earlier, the most efficient strategy was to change to electronic mobile data capture.

The TRCC agreed to follow National MMUCC Guidelines for data element recommendations, pilot testing CRCOG's "question-based" e-Crash approach for crash reporting. The following crash related projects, introduced during the first nine years of the Section 408/405c safety data project funding, relate to the new e-Crash initiative being implemented.

**Electronic Crash Related Projects
by the Year in Which They Were Funded**

Crash Related Project	2007	2008	2009	2010	2011	2012	2013	2014	2015
o NexGen ePR-1 State Law Enforcement to DOT	✓	✓	✓	✓					
o NexGen ePR-1 Local Law Enforcement Pilots	✓	✓							✓
o CRCOG ePR-1 Local Law Enforcement Pilots	✓	✓				✓	✓	✓	✓
o Crash Data Repository (CDR) – UConn				✓	✓	✓			
o 100% Electronic Crash Submission Initiative						✓	✓	✓	✓
o E-Crash MMUCC Compliant Q-Based Initiative						✓	✓	✓	✓
o DOT Crash Data Backlog Initiative				✓	✓	✓	✓	✓	

A new electronic approach for crash reporting should ultimately reduce the amount of time law enforcement spends reporting motor vehicle crashes, especially crashes resulting in property damage only (PDO). More law enforcement departments converting to electronic crash reporting should translate into more timely submission of crash report data to the new CDR, and availability of data for access and analysis.

A new electronic approach for crash reporting based on National MMUCC Guidelines is helping to improve the uniformity of motor vehicle crash reporting; not only between jurisdictions in the state, but between Connecticut and its neighbors in the New England Region as well as with other states in the U.S. also incorporating the National Guidelines.

A combination of improved access and data query tools for the CDR, together with electronic crash reporting, should ultimately result in timeliness of access to crash data on the State CDR of 30 days or less from the date of a crash. Accessibility to the CDR is made available to all authorized stakeholders in the state.

In addition to electronic crash data element recommendations, the focus has been on editing procedures for capturing motor vehicle crash data, options for recording data electronically, various records management systems used by both state and local law enforcement, and most importantly, the existing training and/or emphasis on motor vehicle crash reporting and the records management system tools that law enforcement has received in the past.

As identified in the Introduction, motor vehicle crash statistics help to focus on many of the highway safety challenges:

Driver Distraction/Other Factors	Vehicle Safety/Motorcycle Safety
Air Bag Technologies in Vehicles	Impaired Driving/Speed
Occupant Restraints	Teen/Senior Driving
Child Passenger Safety	Pedestrian/Pedal Cyclist Safety
Roadway Safety/Hazard Elimination	Commercial Vehicle Safety, Other

A detailed PR-1 MMUCC ⁶comparison was updated in April 2015, as support documentation for the Interim Progress Report (IPR) for crash uniformity based on the MMUCC Guideline. The TRCC agreed to the importance of MMUCC compliance following National Guideline recommendations; their focus has been on the number of MMUCC data elements that are included in the ⁷core of a State crash data repository (CDR). With the statewide implementation of the MMUCC 4th Edition, which began in January 2015, the number of MMUCC data elements included in the new revised mobile data capture procedures totals all 77 data elements, recommended for law enforcement to collect at the scene of the crash. Several data elements being adopted will be critical in providing future linkage between the crash and other traffic records files. MMUCC contains many data elements that are required by the Federal Motor Carrier Safety Administration (FMCSA), for reporting commercial motor vehicle crashes.

The TRCC continues its focus on safety data improvement projects that allow measurement of change/impact in the short term. As noted in the 2007 408 application, emphasis was placed on activities like the ⁸CVARS project that provided for electronic capture and submittal of commercial vehicle crash data.

EMS Data Systems – NEMSIS Audit: For the 2006 Section 408 Application, the Office of Emergency Medical Services documented in a letter to the ConnDOT Highway Safety Office that the existing State paper EMS run report contained a third of the recommended Silver NEMSIS data elements.

The use of NEMSIS was mandated beginning January 2007 and all EMS services provided Toughbook laptop computers were required to have ⁹Gold Standard NEMSIS compliant software and be trained in the use of this software.

It should be noted, that the number of NEMSIS data elements captured in a Patient Care Report (PCR) depends upon the seriousness of the calls for service. Beginning in June 2008, PCR data collected electronically was submitted to a server located in the Office of Emergency Medical Services. Emphasis in 2015 continues to assure that all PCR data that are collected electronically are Gold NEMSIS compliant. Emphasis in 2015-2016 will be on 100% compliance in electronic submission of data. Work will also include conversion to NEMSIS v3.

Traffic Records Assessment: Legislation requires that States have performed a Traffic Records Assessment within the past five years for all grant applications after the first year.

As noted in the 2015 Strategic Plan, a NHTSA approved Traffic Records Assessment was conducted in April 2012. A copy of the Assessment is included.

The Traffic Records Assessment provided the following major recommendations, listed below in the first column. Actions taken by the State, as of July 1, 2015, either through the TRCC or separately by an individual agency are listed in the second column.

2012 Traffic Records Assessment

Recommendations from 2012 Assessment	Action(s) taken by State TRCC / DOT / Other Core Data System Agency
1. Finalize and approve the Crash Data Improvement Plan (CDIP) Business Plan.	In late 2011 as 6 th Year Section 408 projects started up, a CDIP assessment was conducted; followed by a Business Plan, finalized in mid-2012.
2. Establish a position for a full time manager of the CDIP process; with a focus on implementing the CDIP Business Plan.	<p>A Data Champion for CDIP was hired in Oct 2012 (start of the 7th Year 408) to focus on the CDIP Business Plan. Roll out of MMUCC PR-1 beginning on Jan 1, 2015, has necessitated the following Crash-related initiatives.</p> <ul style="list-style-type: none"> ▪ Assuring 2015 reporting levels are comparable to previous years, ▪ Assisting with the omission of critical data elements, and bypassing of edits, ▪ Working with RMS vendors to install internal edits, ▪ Providing Field Coordinator follow up with reporting and data quality issues by Region, ▪ Emphasizing key points – avoiding errors, use of Not Applicable, and properly assigning values, ▪ Conducting a baseline experience survey with MMUCC PR-1, i.e., time to capture crash data, ▪ Providing continuous feedback and training on data quality for the MMUCC PR-1, ▪ Updating weekly newsletters, videos, web site resources, outreach to vendors and police depts., ▪ Continuing with the assistance and certification of individual departments.
3. Take advantage of the data sharing effort being lead by the Criminal Justice Information System (CJIS) group. The Connecticut Information Sharing System (CISS) offers a structure to further the TRCC's efforts in data sharing.	CJIS delays from previous year - Indications from recent CJIS updates - could see progress in coming months; Continuation of involvement by the CJIS group supporting E-Crash transfer to the CDR by providing a secure portal through CISS.
4. Establish a two-tier TRCC consisting of an Executive and Technical Committee.	During the past four years, through the National Traffic Records Forum, and other events/emergencies occurring in the State, administrators from the DOT, DMV, DPH, and Judicial Branch, who represent the core safety data systems in the State, became more involved/aware of

Recommendations from 2012 Assessment	Action(s) taken by State TRCC / DOT / Other Core Data System Agency
<p>5. Complete the Connecticut Integrated Vehicle and Licensing System (CIVLS) system modernization project.</p> <p>6. Continue to promote the use of data within the traffic safety community; exploring the capabilities and uses of each of the traffic records system core components (crash, driver, vehicle, etc.), as well as the availability and use of data.</p> <p>7. Continue to support the implementation and maintenance of the State EMS database, the trauma registry, and Injury Surveillance System (ISS).</p>	<p>the actions of the TRCC. In addition, the Governor was directly involved in 2012 in the production of a video, touting the TRCC and its application to the National TRCC for a Best Practices Award for the State's E-Citation initiative.</p> <p>A press briefing was held the previous year, announcing the formation of a new Transportation Safety Research Center (TSRC, initiated by TRCC actions), at the University of Connecticut.</p> <p>Participants included the Governor, Commissioner of DOT, and UConn officials. The TRCC continues to have discussions regarding a possible migration towards a two-tiered TRCC in the future.</p> <p>Currently, the DMV is heavily involved in this multi-year system upgrade/modernization initiative, which reported a delay in system implementation. A project write-up is included in the Strategic Plan Appendices.</p> <p>The Crash Data Repository (CDR) now boasts more than 725 registered users. Many of these users responded in a previous survey their satisfaction with benefits they already receive from online access and data query tools, the number of years of data already contained on the repository and the ability to use linked data and to generate rates based on traffic volume.</p> <p>Even though NHTSA's TRIPRS (Traffic Records Improvement Program Reporting System) program has been pulled from the Web, TRCC Stakeholders continue to focus on the need for a Traffic Records Inventory. Stakeholders continue to discuss/ review descriptive content for each of their respective core areas in the traffic records system; and to possibly share during future TRCC meetings their objectives, uses of the data, challenges, and long-range goals for safety data improvements they may have.</p> <p>Continued long range focus is for all ISS related data systems, including linking crash, EMS, trauma and hospital information and management exchange data to create one record for each patient from the point of injury to the point of hospital discharge.</p> <p>During the initial years of Section 408, the TRCC supported the elevation of the EMS Patient Care Reporting system to a top priority to be able to receive more funding than any other traffic records project.</p> <p>This resulted in nearly statewide implementation of the electronic data capture of NEMSIS compliant data in the State.</p>

Recommendations from 2012 Assessment	Action(s) taken by State TRCC / DOT / Other Core Data System Agency
8. Designate the CDR at the University of Connecticut as the State's official crash file.	As mentioned above, the 2013 kick-off of the TSRC at UConn helped to firm up the designation of the Center as the State's official crash file. With the process underway for statewide implementation of E-Crash in 2015, the CDR at the TSRC is being acknowledged as the official crash file. As stated above, many of the registered users of the CDR (725+) responded in a fairly recent survey their satisfaction with the data, analysis tools and linkage provided by the data center.
9. Charge the TRCC with the development of a new TRSP addressing the recommendations in this traffic records assessment.	The TRCC is constantly updating the Traffic Records Strategic Plan (TRSP), with a focus on safety data related issues, identified in other State planning initiatives, i.e., the HSIP, HSP, CVSP and SHSP.
10. Assure that all TRCC members participate in the development of the TRSP and the selection and priority setting of the projects in the Plan.	While the TRCC distribution of messages, notices, and indicators to review content at the TRCC website totals more than 100 stakeholders; 30 stakeholders participate (on the average) in regular monthly meetings. It is through both the in-person participation during monthly meetings, and the use of the TRCC website, e-mail and phone connections, that members continue to participate at a high level in the development and approval of the TRSP.
11. Implement a MMUCC compliant crash report for the State.	ConnDOT, through its CDIP effort, with TRCC support, began in 2015 the roll-out an electronic crash reporting system using the MMUCC Guideline 4 th Edition as the basis for its crash data collection. As previously mentioned all 77 of the MMUCC 4 th Edition data elements, recommended to be captured at the scene of a crash, are being captured in the new MMUCC PR-1 crash reporting system; 75 of those 77 elements are being uploaded to the State CDR at UConn.
12. Statewide 100 percent electronic crash data collection.	Refer to previous recommendation.
13. Digital roadway network (DRN) for state and local roads.	Included under the TRCC's 7 th Year Section 408 application, the State DOT has undertaken a large initiative to achieve this objective for all roadways. Titled, "Integrated Enterprise Base Map and Linear Referencing System" (IEBM - LRS); refer to Appendix for overview.
14. Roadway inventory system (RIS).	The State DOT, aware of continued developments in FHWA's Model Inventory of Roadway Elements (MIRE) recommendations, has made the RIS a major component of the IEBM - LRS.
15. Statewide 100 percent collection of electronic citation data.	Headed by the State's Judicial Branch, this effort is experiencing a boost with a recent decision by the State Police to implement E-Citation statewide for all troopers. The State has surpassed the 50 percent mark for all citations being submitted electronically.

Recommendations from 2012 Assessment	Action(s) taken by State TRCC / DOT / Other Core Data System Agency
16. Electronic versions of a traffic warning as well as a misdemeanor summons.	<p>A 10th Year project will focus on completing E-Citation Statewide - implementation for Local Law Enforcement.</p> <p>Included as priority improvements for the Section 405c 9th Year application, the following projects are being included for 10th Year extensions to continue the focus in these important areas. Electronic Charging as well as Electronic Processing for Citations/Warnings/Summons Arrests.</p>
17. Add Citation data to the new TSRC at UConn.	<p>This recommendation continues to remain a focus and depending on the availability of 405c funding later this year, could rise up in the list of priorities, to be considered. Currently listed under other projects, following the priority list of proposed 10th Year projects.</p> <p>A push by the State Police to implement DDACTS (Data Driven Approach to Crime and Traffic Safety), should help drive the need to combine motor vehicle crash with citation information layered onto a mapping platform, permitting the mapping of motor vehicle crash and traffic enforcement.</p>

Deficiencies

Legislation requires that states list their system deficiencies and how those deficiencies were determined. As noted in the 2007 and 2012 traffic records assessments, existing deficiencies in the current traffic records system had been previously identified, and became the basis for all of the Section 408 Applications, dating back to 2006-2007.

Deficiency Description: This section contains brief descriptions of system deficiencies. The following represents brief statements of traffic records system deficiencies previously identified. Deficiencies are described according to their respective traffic records system core areas with reference to a specific performance area (timeliness, uniformity, completeness, accuracy, accessibility, and integration) that is to be addressed by improving the system deficiency.

Note: In 2006, the NHTSA review team categorized and documented on its web site (43) deficiencies for Connecticut's traffic records system from the information provided in the 2006-2007 Section 408 Application. The deficiency ID numbers introduced by the NHTSA Team have been maintained for their reference and update; however the deficiencies have been reordered by Core System Area and by priority of safety data improvement projects. Notations have also been made in instances where identified deficiencies were duplicated, such as #3 and #7, which represent the same deficiency.

Deficiency by Core System Area**Injury Surveillance – EMS Run Reporting System**

Deficiency ID				
CT-D-00050				
Performance Area	System	Basic Description	Status	Last Update
Completeness/ Timeliness/ Uniformity	Injury Surveillance/ EMS	Specific focus	July 1, 2008 OEMS began receipt of electronic EMS PCR data	7-01-15
Deficiency Description				
Continued long range focus of OEMS will be all ISS related data systems, including linking motor vehicle crash, pre-hospital EMS, trauma and Connecticut Hospital Information and Management Exchange (CHIME) data to create one record for each patient from the point of injury to the point of hospital discharge.				

Crash System

Deficiency ID				
CT-D-00011				
Performance Area	System	Basic Description	Status	Last Update
Completeness	Crash	Specific focus	Electronic reporting key	7-01-15
Deficiency Description				
Local road PDO reports were previously not entered into the ConnDOT accident file. This is addressed in three out of the four main projects submitted through four years of Section 408 applications. Local PDO crash data was entered into the ConnDOT Crash file for 2007-2010, excluded for 2011, and reinstituted in 2012.				

Deficiency ID				
CT-D-00041				
Performance Area	System	Basic Description	Status	Last Update
Completeness	Crash	Specific focus	Electronic reporting key	7-01-15
Deficiency Description				
Crash data lacking for Local roads, PDO crashes and all crashes. Relates to CT-D-00011.				

Deficiency ID				
CT-D-00012				
Performance Area	System	Basic Description	Status	Last Update
Completeness	Crash	Specific focus	Electronic reporting key	7-01-15
Deficiency Description				
Two-thirds of the data elements from all reportable crashes not entered into the ConnDOT crash				

file. With the implementation of the MMUCC PR-1, beginning in January 2015, 75 of the 77 at crash scene/recommended MMUCC 4th Edition data elements are now being entered into the State Crash Data Repository (CDR) at the University of Connecticut Transportation Safety Research Center (TSRC).

Deficiency ID				
CT-D-00015				
Performance Area	System	Basic Description	Status	Last Update
Timeliness	Crash	Specific focus	Electronic reporting key	7-01-15
Deficiency Description				
Delays in obtaining the crash data. This is addressed in several of the main projects submitted through nine years of Section 408/405c applications. With the implementation of the MMUCC PR-1, beginning in January 2015, and crash data now being entered into the State CDR at UConn; 10 th year safety data improvements funding is being dedicated to support local law enforcement as they adopt electronic reporting and move away from paper, and pdf reporting.				

Deficiency ID				
CT-D-00016				
Performance Area	System	Basic Description	Status	Last Update
Integration	Crash	Specific focus	Crash data repository key	7-01-15
Deficiency Description				
Legacy crash data system can't accommodate electronic transmission of crash reports. The State CDR at UConn is now accepting electronic crash reporting from State and local law enforcement. Electronic reporting of the MMUCC PR-1, which began on January 1, 2015, will continue to improve as the year progresses and into 2016, with the support of 10 th year funding.				

Deficiency ID				
CT-D-00017				
Performance Area	System	Basic Description	Status	Last Update
Integration	Crash	Specific focus	Crash data repository key	7-01-15
Deficiency Description				
Legacy crash data system can't support other new input/output capabilities. The State CDR at UConn is now accepting electronic crash reporting from all law enforcement in the State. The CDR is meeting the needs of many users for direct online data query and analysis tools.				

Deficiency ID				
CT-D-00018				
Performance Area	System	Basic Description	Status	Last Update
Accessibility	Crash	Specific focus	Crash data repository key	7-01-15
Deficiency Description				
Legacy crash data system has poor user access. Refer to description for CT-D-00017. The State CDR is meeting the needs of many users (725+) for direct online data query and analysis tools.				

Deficiency ID				
CT-D-00019				
Performance Area	System	Basic Description	Status	Last Update
Integration	Crash	Specific focus	Crash data repository key	7-01-15
Deficiency Description				
Legacy crash data system has no capabilities to link to other systems. Refer to description for CT-D-00017. The State CDR is meeting the needs of many users for linked data involving crash, roadway and traffic volume data for State, Interstate and U.S. Routes.				

Deficiency ID				
CT-D-00020				
Performance Area	System	Basic Description	Status	Last Update
Completeness	Crash/Vehicle	Specific focus	Electronic reporting key	7-01-15
Deficiency Description				
Reporting of commercial motor vehicle (CMV) crashes was incomplete and inconsistent. Through funding from the Federal Motor Carrier Safety Administration (FMCSA), the Commercial Vehicle Safety Division (CVSD) of the Department of Motor Vehicles has achieved 100 percent electronic citation and crash reporting, with direct upload to the Federal SafetyNet System.				

Deficiency ID				
CT-D-00035				
Performance Area	System	Basic Description	Status	Last Update
Timeliness	Crash/Vehicle	Specific	CVARs	7-01-15
Deficiency Description				
The capture and upload of CMV crash data for SafetyNet is now automated.				

Deficiency ID				
CT-D-00036				
Performance Area	System	Basic Description	Status	Last Update
Timeliness	Crash	Specific	FARS	7-01-15
Deficiency Description				
FARS-information regarding alcohol or drugs (crash related) can be delayed. Important initiative, continually stressed by NHTSA. TRCC is very supportive of the FARS Office in focusing on this important issue.				

Deficiency ID				
CT-D-00037				
Performance Area	System	Basic Description	Status	Last Update
Timeliness	Crash	Specific	FARS	7-01-15
Deficiency Description				
Submission of FARS data can be delayed if there are extenuating circumstances such as delays in obtaining BAC data. NHTSA continues to stress this initiative, and the TRCC is very supportive of the Connecticut FARS office in addressing this important issue.				

Deficiency ID				
CT-D-00001				
Performance Area	System	Basic Description	Status	Last Update
Completeness	Crash	General	Electronic reporting key	7-01-15
Deficiency Description				
Incomplete reports – this is a general description. It is not targeted specifically in any of the ongoing safety data projects; however, through electronic roadside data capture for the new MMUCC PR-1 crash reporting system (with built in edit and validity checks), this deficiency is being addressed.				

Deficiency ID				
CT-D-00002				
Performance Area	System	Basic Description	Status	Last Update
Accessibility	Crash	General	Crash data repository key	7-01-15
Deficiency Description				
Data does not meet the requirement of most traffic safety data users. State CDR at UConn, now boasts more than 725 registered users. The CDR is becoming more of a one-stop shop for local law enforcement, implementing the new MMUCC PR-1 crash reporting system. A 10 th year project is planned to provide upgraded data query tools as well as canned output reports for local law enforcement and other users.				

Deficiency ID				
CT-D-00003				
Performance Area	System	Basic Description	Status	Last Update
Uniformity	Crash/Roadway	Specific focus	Electronic reporting with GPS key	7-01-15
Deficiency Description				
Location data is not consistently reported. The crash location is usually determined by reference to the narrative, and if included, GPS coordinates provided on the PR-1 by the investigating officer. This deficiency also relates to the Roadway Core System. Future State efforts to establish/implement a GIS base map that can be integrated with electronic reporting is also an important initiative in addressing this deficiency. Parallel efforts by law enforcement to enhance location reporting using the lat/long of a crash event, and ConnDOT's effort to establish a State GIS Base Map should help to improve the consistency of location data.				

Deficiency ID				
CT-D-00004				
Performance Area	System	Basic Description	Status	Last Update
Completeness	Crash	General	Electronic reporting key	7-01-15
Deficiency Description				
Alcohol, contributing circumstances, other data often not recorded. Implementation of new MMUCC PR-1 crash reporting system should help to address this deficiency.				

Deficiency ID				
CT-D-00005				
Performance Area	System	Basic Description	Status	Last Update
Uniformity	Crash	Specific focus	MMUCC PR-1 crash reporting	7-01-15
Deficiency Description				
Data not compatible/comparable with other states. Implementation of new MMUCC PR-1 crash reporting system, beginning in January 2015, should help to address this deficiency. As previously mentioned 75 out of 77 MMUCC 4 th Edition at scene recommended crash data elements are now being entered into the State CDR at UConn.				

Deficiency ID				
CT-D-00006				
Performance Area	System	Basic Description	Status	Last Update
Timeliness	Crash/Roadway	Specific	Electronic reporting with GPS key	7-01-15
Deficiency Description				
Identifying crash location on a State reference map from field information is time consuming. Future State efforts to establish/implement GIS base map that can be integrated with electronic reporting is critical. Refer to description 00003 on the previous page – State GIS base map.				

Deficiency ID				
CT-D-00007				
Performance Area	System	Basic Description	Status	Last Update
Uniformity	Crash/Roadway	Specific focus	Electronic reporting with GPS key	7-01-15
Deficiency Description				
Location data is inconsistent. This is a repeat of CT-D-00003. Parallel developments involving law enforcement with the new MMUCC PR-1 crash reporting system and the ConnDOT GIS base map development effort.				

Deficiency ID				
CT-D-00008				
Performance Area	System	Basic Description	Status	Last Update
Accuracy	Crash	General	Electronic reporting key	7-01-15
Deficiency Description				
Handwritten reports are sometimes difficult to read. Being addresses in the new electronic MMUCC PR-1 crash reporting system implemented, beginning in January 2015.				

Deficiency ID				
CT-D-00009				
Performance Area	System	Basic Description	Status	Last Update
Accuracy	Crash	General	Electronic reporting key	7-01-15
Deficiency Description				
Copy errors. Being addresses in the new electronic MMUCC PR-1 crash reporting system implemented, beginning in January 2015.				

Deficiency ID				
CT-D-00010				
Performance Area	System	Basic Description	Status	Last Update
Completeness	Crash	General	Electronic reporting key	7-01-15
Deficiency Description				
Incomplete reports. This is a repeat of CT-D-00001. Being addresses in the new electronic MMUCC PR-1 crash reporting system implemented, beginning in January 2015.				

Deficiency ID				
CT-D-00013				
Performance Area	System	Basic Description	Status	Last Update
Accuracy	Crash	General	Crash data repository key	7-01-15
Deficiency Description				
Duplication of data entry at State and Local levels. State Crash Data Repository (CDR) now exists at the University of Connecticut, with support from the Connecticut Department of Transportation. State CDR now able to accept data from the new MMUCC PR-1 crash reporting system; should alleviate the need for local law enforcement to maintain a duplicate data entry process.				

Deficiency ID				
CT-D-00014				
Performance Area	System	Basic Description	Status	Last Update
Accuracy	Crash	General	Electronic reporting key	7-01-15
Deficiency Description				
Transposition errors made in preparing the finished report. Being addresses in the new electronic MMUCC PR-1 crash reporting system implemented, beginning in January 2015.				

Deficiency ID				
CT-D-00021				
Performance Area	System	Basic Description	Status	Last Update
Completeness	Crash/Citation/Adjudication	General	Electronic reporting key	7-01-15
Deficiency Description				
Officers tend not to indicate contributing circumstances or other factors if driver is not cited. Relates to CT-D-00004. Being addresses in the implementation of the new electronic MMUCC PR-1 crash reporting system, which began in January 2015.				

Deficiency ID				
CT-D-00044				
Performance Area	System	Basic Description	Status	Last Update
All areas	Crash	General	Training/feedback key	7-01-15
Deficiency Description				
Feeling by law enforcement that crash reporting is only for insurance purposes and court use. Being addresses in the new electronic MMUCC PR-1 crash reporting system implemented, beginning in January 2015.				

Deficiency ID				
CT-D-00045				
Performance Area	System	Basic Description	Status	Last Update
Accuracy/Uniformity	Crash	General	Training/feedback key	7-01-15
Deficiency Description				
Confusion at times by law enforcement concerning classification of motor vehicle crashes. Being addressed in the new electronic MMUCC PR-1 crash reporting system, which began in January 2015.				

Deficiency ID				
CT-D-00046				
Performance Area	System	Basic Description	Status	Last Update
All areas	Crash	General	Training/feedback key	7-01-15
Deficiency Description				
Lack of feedback to law enforcement as to the value of and how data is used for highway traffic safety planning. Being addresses in the new electronic MMUCC PR-1 crash reporting system, which began in January 2015.				

Deficiency ID				
CT-D-00047				
Performance Area	System	Basic Description	Status	Last Update
All areas	Crash/Citation/	General	Training/feedback	7-01-15

	Adjudication		key	
Deficiency Description				
Feeling by law enforcement that they are forced to become data entry operators. Being addressed in the new electronic MMUCC PR-1 crash reporting system, which began in January 2015.				

Citation/Adjudication System

Deficiency ID				
CT-D-00026				
Performance Area	System	Basic Description	Status	Last Update
Timeliness	Citation/Adjudication	General	e-Citation/CIDRIS	7-01-15
Deficiency Description				
Too much radio time between dispatch and officer in the field conducting an enforcement stop. Impacts from an electronic citation processing system and Impaired Driver Records Information System (CIDRIS) will continue to have measurable impacts in 2015 – 2016.				

Deficiency ID				
CT-D-00027				
Performance Area	System	Basic Description	Status	Last Update
Accuracy	Citation/Adjudication	General	e-Citation/CIDRIS	7-01-15
Deficiency Description				
Quality of driver, vehicle, citation, other data lacking. Measurable impacts expected in 2015 – 2016.				

Deficiency ID				
CT-D-00032				
Performance Area	System	Basic Description	Status	Last Update
Accessibility	Citation/Adjudication	General	e-Citation/CIDRIS	7-01-15
Deficiency Description				
Lack of real time access to critical data “24-7”. Measurable impacts expected in 2015 – 2016.				

Deficiency ID				
CT-D-00033				
Performance Area	System	Basic Description	Status	Last Update
Uniformity	Citation/Adjudication	General	e-Citation/CIDRIS	7-01-15
Deficiency Description				
Lack of standards to permit better sharing of justice information. Measurable impacts expected in 2015 – 2016.				

Deficiency ID				
CT-D-00034				
Performance Area	System	Basic Description	Status	Last Update
Uniformity	Citation/Adjudication	General	e-Citation/CIDRIS	7-01-15
Deficiency Description				
Delays in obtaining data. Measurable impacts expected in 2015 – 2016.				

Deficiency ID				
CT-D-00054				
Performance Area	System	Basic Description	Status	Last Update
Accuracy	Citation/Adjudication	General	e-Citation/CIDRIS	7-01-15
Deficiency Description				
Issuance of paper-based citation for impaired drivers. Measurable impacts expected in 2015 – 2016.				

Deficiency ID				
CT-D-00055				
Performance Area	System	Basic Description	Status	Last Update
Integration	Citation/Adjudication	General	e-Citation/CIDRIS	7-01-15
Deficiency Description				
Duplication in data entry of reports for impaired drivers. Measurable impacts expected in 2015 – 2016.				

Deficiency ID				
CT-D-00056				
Performance Area	System	Basic Description	Status	Last Update
Completeness	Citation/Adjudication	General	e-Citation/CIDRIS	7-01-15
Deficiency Description				
Handwritten reports sometimes difficult to read; copying errors; incomplete reports. Measurable impacts expected in 2015 – 2016.				

Driver License/History System

Deficiency ID				
CT-D-00022				
Performance Area	System	Basic Description	Status	Last Update
Integration	Driver License/History	General	CIVLS project underway	7-01-15
Deficiency Description				
Lack of a customer account number to tie related driver and vehicle information together. DMV is addressing this with a major system re-design – CIVLS (Connecticut Integrated Vehicle and Licensing System).				

Deficiency ID				
CT-D-00023				
Performance Area	System	Basic Description	Status	Last Update
Integration	Driver License/ History	General	CIVLS Enterprise Modernization Project key	7-01-15
Deficiency Description				
DMV files are more stand-alone, not linked files. DMV is addressing this in a new system re-design (CIVLS).				

Deficiency ID				
CT-D-00024				
Performance Area	System	Basic Description	Status	Last Update
Accuracy	Driver License/ History	General	Electronic field reporting with link to DMV Driver files	7-01-15
Deficiency Description				
Data on DL, such as driver address can be outdated. TRCC sponsored E-Citation project and a real-time interface to DMV's information system for most current customer information on file will ultimately impact this issue.				

Deficiency ID				
CT-D-00025				
Performance Area	System	Basic Description	Status	Last Update
Timeliness	Driver License/ History	General	CIVLS Enterprise Modernization Project key	7-01-15
Deficiency Description				
Some processed DMV data not timely. DMV is addressing this in a new system re-design.				

Deficiency ID				
CT-D-00048				
Performance Area	System	Basic Description	Status	Last Update
Completeness	Driver License/ History	General	CIVLS Enterprise Modernization Project key	7-01-15
Deficiency Description				
Lack of DL data on drivers with serious driving offenses from previous state of record. Currently, the Commercial Driver License Information System (CDLIS) provides DMV with the driving history record of a former out of state CDL operator that is seeking a CT credential. The violation information is recorded in DMV's driver history system and is available to law enforcement via DMV's driver history file through the COLLECT system. With regard to non-CDL operators, DMV performs a National Driver Registry (NDR) and Problem Driver Pointer System (PDPS) check				

prior to issuance. PDPS will record and store open/pending actions on a motorist due to traffic offenses recorded in the other state and where administrative action was taken by that jurisdiction's motor vehicle agency. In addition, DMV will not permit an operator found within that system to obtain a CT credential unless the problem is resolved with the prior state. There is no national electronic system available to DMV for non-CDL operators, such as CDLIS is for commercial drivers, to check for serious offenses in which the operator's credential was restored.

Deficiency ID				
CT-D-00049				
Performance Area	System	Basic Description	Status	Last Update
Completeness	Driver License/History	General	No integration planned between DMV's non-CDL credential/vehicle information and the collection of crash data by law enforcement.	7-01-15
Deficiency Description				
Lack of driver crash data for driver control and improvement. ConnDOT is the entity responsible for the collection of crash related data. Since DMV is not authorized to collect crash data for non-CDL types of activities there is no integration planned.				

Deficiency ID				
CT-D-00057				
Performance Area	System	Basic Description	Status	Last Update
Integration	Driver License/History	General	CIVLS Enterprise Modernization Project key	7-01-15
Deficiency Description				
Lack of features incorporated into a real-time system, such as - NMVTIS, an electronic lien system, and integration with the driver system. DMV's driving history is a record of offenses and violations by an operator and as such, does not record vehicle-related information such as NMVTIS and ELT. However, CIVLS will have a unique customer (i.e., customer centric system) that is planned on linking a customer's vehicle, title, credential, and sanction-related information.				

Roadway System

Deficiency ID				
CT-D-00028				
Performance Area	System	Basic Description	Status	Last Update
Completeness	Roadway	General	Base map key	7-01-15
Deficiency Description				
State lacks a standardized location reference system. State efforts initiated to establish and implement GIS base map that can be integrated with electronic field reporting, providing latitude and longitude coordinates. Another State initiative is developing a linear referencing system that will link to other roadway systems.				

Deficiency ID				
CT-D-00029				
Performance Area	System	Basic Description	Status	Last Update
Uniformity	Roadway	General	Roadway inventory system	7-01-15
Deficiency Description				
Roadway inventory data not standardized or automated for gathering, analysis and dissemination. State initiative to develop a roadway inventory system containing roadway characteristics data has been implemented.				

Deficiency ID				
CT-D-00030				
Performance Area	System	Basic Description	Status	Last Update
Completeness	Roadway	General	Local data key	7-01-15
Deficiency Description				
Roadway inventory for local roadways is deficient compared to the inventory of the State's system. Possible future application for new FHWA MIRE Guideline – Model Inventory of Roadway Elements.				

Deficiency ID				
CT-D-00031				
Performance Area	System	Basic Description	Status	Last Update
Accuracy	Roadway/Crash	General	Crash data repository key	7-01-15
Deficiency Description				
The State safety improvement programs are linked to upgrading the extant, outdated legacy reporting system. A State Crash Data Repository was implemented at the University of Connecticut, with support from the Department of Transportation.				

Injury Surveillance/EMS System

Deficiency ID				
CT-D-00038				
Performance Area	System	Basic Description	Status	Last Update
All areas	Injury Surveillance/ EMS	General	Priority improvements	7-01-15
Deficiency Description				
There continues to be limited resources for injury surveillance and data analysis including a lack of human resources and funding for both Injury Surveillance and CODES. The State has focused on developing and completing an Injury Surveillance System, an EMS Patient Care Report as well as provision of data for the Crash Outcome Data Evaluation System (CODES). Linkage between Crash, EMS, Trauma and CHIME data is a continued focus of the Office of EMS.				

Deficiency ID				
CT-D-00039				
Performance Area	System	Basic Description	Status	Last Update
All areas	Injury Surveillance/ EMS	General	Improvements in other areas key	7-01-15
Deficiency Description				
Dependency on crash, location identification and other traffic record system data require significant improvements. Many other related system improvements are described in the 2006 Strategic Plan.				

Deficiency ID				
CT-D-00051				
Performance Area	System	Basic Description	Status	Last Update
Integration	Injury Surveillance/ EMS	General	High priority focus of Department of Health	7-01-15
Deficiency Description				
A statewide electronic centralized Trauma Registry has been implemented – data available from 2005 - present.				

Deficiency ID				
CT-D-00052				
Performance Area	System	Basic Description	Status	Last Update
Uniformity	Injury Surveillance/ EMS	General	NEMSIS data element standard providing momentum	7-01-15
Deficiency Description				
The Patient Name/SSN exists in all databases to track a patient/victim from the scene of a crash through the healthcare system. Availability of these data allows for the use of deterministic linkage between databases. CODES System linkage/data analysis is an excellent tool for promoting patient tracking systems development, but no funding is currently dedicated.				

Deficiency ID				
CT-D-00053				
Performance Area	System	Basic Description	Status	Last Update
Accessibility	Injury Surveillance/EMS	General	Previously, a CODES Advisory Board - in place	7-01-15
Deficiency Description				
Lack of access to comprehensive medical and healthcare data files by authorized data partners.				

All Core Component Areas - TRCC

Deficiency ID				
CT-D-00040				
Performance Area	System	Basic Description	Status	Last Update
All areas	All systems	General	Focus of 408/405c Programs	7-01-15
Deficiency Description				
TRCC – Traffic Records System agencies have made progress in the appreciation of other agencies' roles and responsibilities. Highway Safety Office is fully committed to support of the TRCC.				

Deficiency ID				
CT-D-00042				
Performance Area	System	Basic Description	Status	Last Update
All areas	All systems	General	Documented in 2006 Strategic Plan	7-01-15
Deficiency Description				
The State lacks a Problem ID manual with training. As addressed in the Strategic Plan, State could adopt a “best-practices” approach from another state.				

Deficiency ID				
CT-D-00043				
Performance Area	System	Basic Description	Status	Last Update
Accessibility	All systems	General	2006 Strategic Plan	7-01-15
Deficiency Description				
The State lacks data access, data analysis tools and appropriate training for authorized users. A user-friendly tool, such as the ¹⁰ CARE system could be considered. Already having a positive impact on data access, data analysis and map-based data query tools, is the new Transportation Safety Research Center. A 10 th year safety data project will be dedicated to improving the data query, output and canned reports available through the State CDR at UConn.				

Safety Data Projects

Project Prioritization: (Legislation requires that States document how they prioritized projects).

For the 2006 Section 408 Application, projects were selected and prioritized using a combination of factors. Part 1 of the 2006 Application – Deficiency Analysis and Major Strategies, page 2 – used the criteria defined below. The following program areas were listed based on a ranking of priorities by a two-thirds representation of the TRCC. For detail of each of these program areas, refer to the 2006 Strategic Plan.

1. Crash Data Content – Adopting MMUCC v4 data element recommendations
2. Location Reference System (LRS) – ConnDOT's Integrated Enterprise Base Map and LRS
3. Crash e-Data Capture – Rollout, January 2015, new MMUCC electronic crash reporting system
4. Crash Data Clearinghouse – In 4th year with more than 725 registered users of CDR
5. Crash Report Training – Train-the-Trainer effort in parallel with new crash system rollout
6. Driver/Vehicle – Modernization project – CIVLS
7. Citation/Adjudication – CIDRIS (Integration efforts underway between DMV, DCJ, DPS, Judicial)
8. TRCC – Leadership, Financial Assistance, Executive Level Oversight
9. Roadway – Road Inventory major component of new ConnDOT Base Map and LRS initiative
10. CVARS – Commercial Vehicle Safety Division – complete electronic crash and citation reporting
11. FARS – Model system; need for continual emphasis in complete and timely reporting
12. ISS/EMS – Efforts underway to review/strengthen data capture/linkage within ISS/EMS
13. Data Analysis – HSO uses outside support for highway safety planning; as noted above, CDR providing data query and analysis tools to more than 725 registered users

These program areas were reviewed in comparison to the major recommendations of the 2007 and 2012 Traffic Records Assessments, and as previously stated, there did not appear to be any substantive change to the emphases currently being pursued by the TRCC.

Identified in the 2006 Strategic Plan, a challenge for the State has continued to be the lack of a State crash data repository to be able to accommodate/accept the electronic transmission of PR-1 crash reports from law enforcement agencies statewide. Rated high in the Strategic Plan, the planning for a crash data repository received less attention during the 2006 Section 408 Application, after the state was advised to submit projects that could show quick results. This year the TRCC continues to place greater emphasis in this area; CDR at the University of Connecticut, now supports more than 725 registered users.

Previously, the focus of the TRCC on safety data improvement projects that would show change/impact in the short term directed it to consider/benefit from the success of CVARS and to implement projects that included electronic crash data collection. The decision was also made to learn from the success of electronic collection of EMS Patient Care Report (PCR) data, already underway. In 2006, the NHTSA review team cataloged seven projects from the information provided in the 2006 Section 408 Application. The project ID numbers have been maintained for reference and update by the NHTSA Team.

In 2015, projects were prioritized, by reviewing, discussing and building on the 2014 application, in which most of the emphasis had been placed on both E-Crash and E-Citation projects. The TRCC determined through consensus to continue this trend into the tenth year Section 405c applications, to a large degree because a major focus is to strategize how to enhance efforts to go statewide with both of these important and related safety data improvement initiatives.

Note: The same project reference numbering initiated by NHTSA during the first year of the Section 408 funding is still being used for the 2015 applications.

Four Box Analysis - Section 405c Application - July 2015

Project ID #	¹ COST	DURA	COORDINATION	AFFECT PROGRAM GOALS	LIKELIHOOD OF SYSTEM IMPACT	COSTS/RISKS ASSOCIATED W/FAILURE	FOUR-BOX CELL
		Short (1-2Yr) or longer	Challenges, uncertainties?	Affect to the core system improvement, development?	How likely to achieve impact?	Costs/risks associated with failure?	² (a), (b), (c), (d)
E- Crash - Techn/Software Support for Local Law Enforcmt Agencies (LEAs)	High	Medium	Multiple stakeholder – LEAs in varying states of preparedness (technology/software)	Medium to high depending on the funding received and participation by LEAs	High	Medium	a ~ d
E-Citation - Complete Installation Statewide for Local LEAs	Medium	Medium	Focusing on Local LEAs; introducing other printer applications, i.e., warnings	Medium to high, depending on the funding received and participation by LEAs	High	Medium	a ~ d
E-Charging - Citation/Warning/Summons Arrest	Medium	Long	Coordination with State and Local LEAs; longer range with Courts	High	High	High	d
E-Processing - Citation/Warning/Summons Arrest	Medium	Long	Coordination with State and Local LEAs; DMV; Judicial; Courts	High	High	High	d
Link Crash/Injury Data Sets/Injury Outcome Assmt	Low	Medium	Coordination with DOT/DPH est. Research agreement	Medium	Medium	Low	b
State CDR - Expand Functionality/Data Query/Toolset	Medium	Medium	Hiring developer; lead time – challenge to complete 1 year	High	High	Medium	a
EMS Track & Rept System – Data Linkage	Low	Medium	Linking Crash, EMS, Trauma, and ¹¹ CHIME data	Medium to high, pending percentage, etc.	Medium	Low	a

Four Box Analysis Chart – Cell Rating

(a) Low Cost – High Payoff	(d) High Cost – High Payoff
(b) Low Cost – Low Payoff	(c) High Cost – Low Payoff

1) \$500k or less (Low), \$500-999k (Med), \$1Million or greater (High)

2) Cell - 'a' (Low cost – high payoff) – recommended first

3) Key is to build in funding stream

Safety Data Project Selection:

In making project selections for the July 2015 405c submission, input from TRCC stakeholders was obtained during TRCC meetings from January 2015 to June 2015, e-mails and follow-up phone calls focusing on the TRCC website, the emerging Strategic Plan and the importance of reaching consensus for the tenth year of the Section 405c funding. Other factors included building on the priority of the 2015 Section 405c project selections, focusing on rolling out MMUCC PR-1 E-Crash as well as expanding E-Citation statewide, and building a base for linking crash with EMS, trauma, and hospital information. Recommendations from past assessments in 2007 and 2012 were also considered.

The following represent the proposed projects for the July 2015 Section 405c application. From the involvement and influence of representatives from the law enforcement, judicial, public health and research communities, electronic roadside data capture of citation information together with motor vehicle crash, emergency response and hospital information, back-end data repositories and a strengthening of the State Crash data repository are seen as top priority objectives the TRCC seeks to achieve.

Projects being proposed for 10th Year Section 405c funding in the 2015 application include:

- 1) Electronic Crash - Technology/Software Support for Local Law Enforcement
- 2) Electronic Citation - Complete Installation Statewide for Local Law Enforcement
- 3) Electronic Charging - Citation/Warning/Summons Arrest
- 4) Electronic Processing - Citation/Warning/Summons Arrest
- 5) Linking Crash/Injury Datasets - Measure Injury Outcomes Assessed by Health Care Providers
- 6) Crash Data Repository (CDR) - Expand Functionality/Query Tools/Canned Output Reports
- 7) EMS/ISS - Data System Tracking/Linkage Assessment

Performance Measures and Goals

In listing performance measures, the same reference numbers that were documented by the NHTSA review team for the 2006 Section 408 application for Connecticut have been included for referencing and update purposes. Some of the measures are duplications (such as 03 and 04). Additional performance measures (18-22) have been included that were proposed for the first year Section 408 funding, but were not recorded.

**Performance Measures by
Performance Area vs. Safety Data Core System**

	Crash	Citation/ Adjudication	Driver	Vehicle	Roadway	Injury Control/EMS
Completeness	01, 16, 22, 06				06	18
Uniformity	08, 21,					19
Timeliness	07, 15, 17, 20	02, 09, 10, 11	11	20		
Integration		03, 04, 12, 13, 14				
Accessibility		05				
Accuracy						

The (17) performance measures documented by the NHTSA team from Connecticut's 2006 Section 408 application are presented using the NHTSA assigned reference numbers. They have been re-ordered, however, to reflect the priority records system improvement efforts pursued by the TRCC beginning with the Injury Control/EMS Core System area.

Measures that relate to Citation/Adjudication are listed together following the Crash and EMS emphasis areas. Measures #11 (Citation/Adjudication and Driver), #20 (Crash and Vehicle), and #6 (Crash and Roadway) represent initiatives that relate to more than one core system area.

For reference to #06 (Crash/CSP – Completeness), #15 (Crash/CAPTAIN – Timeliness), #20 (Crash/CVARS – Timeliness), and #17 (Crash – Timeliness/this performance measure, documented by the NHTSA review team in 2006, and already included in CT-M-00007, CT-M-00015, and CT-M-00020), refer to the 2007 Traffic Records Strategic Plan.

Motor Vehicle Crash – Uniformity – Performance Measure

Connecticut's April 2015 application for **Determination of Measurable Progress** was based on:

The uniformity of the Motor Vehicle Crash database improved, as evidenced by the increase from 24 MMUCC-compliant crash data elements reported by both State and Local law enforcement and entered into the crash database for the years leading up to and ending December 31, 2014, to 75 MMUCC-compliant data elements entered into the State CDR (crash database), beginning January 1, 2015.

Motor Vehicle Crash – Timeliness – Interim Progress Report

Connecticut's April 2014 **Determination of Measurable Progress** was based on:

The timeliness of the Motor Vehicle Crash database improved, as evidenced by the decrease, from 377 days during April-March 2013, to 167 days during April-March 2014, in the number of days from the report of a motor vehicle crash to entry into the ConnDOT database. Because this improvement occurred within the 12 months immediately preceding the FY 2014 due date for applications for State Traffic Safety Information System Improvements Grants in FY 2014, it was determined to be a demonstration of current progress.

Citation/Adjudication – Timeliness – Interim Progress Report

Connecticut's March 2013 **Determination of Measurable Progress** was based on:

The timeliness of the Citation/Adjudication database improved, as evidenced by the decrease, from 19.03 days during July-September 2012, to 15.61 days during October-December 2012, in the average number of days from citation issuance by the Connecticut State Police to entry of the citation record into the Centralized Infractions Bureau database. Because this improvement occurred within the 12 months immediately preceding the FY 2013 due date for applications for State Traffic Safety Information System Improvements Grants in FY 2013, it was determined to be a demonstration of current progress.

Crash/Roadway/Traffic Volume Data – Linkage – Interim Progress Report

Connecticut's July 2013 **Determination of Measurable Progress** was based on:

Linkage of records in the state crash database (using route and milepost) for State, Interstate and U.S. Routes, with roadway and traffic volume data from the Connecticut Department of Transportation's (ConnDOT) Roadway Inventory System (RIS) was achieved for calendar years 2002 through 2010 and made publically available in March 2013. This equates to 580,000 crashes or 71.2 percent of the total reported motor vehicle crashes (815,089) for the nine-year time period.

Future improvements anticipated include the linkage of crash data for local roads with data from the roadway database.

**Performance Measures by
Performance Area vs. Safety Data Core System**

Injury Surveillance/EMS – Completeness			
Measure ID: CT-M-00018			
Status	Performance Area	System	Direction
1-1-07 Provision of Toughbook laptop computers to EMS providers began.	Completeness	Injury Surveillance/EMS	Increase
Measurement			
Improve the completeness of the Injury Surveillance/EMS core system by increasing the number and			

percent of electronically collected Patient Care Reports (PCRs) where the baseline was zero prior to first year funding and goal levels are as presented below.							
Measurement Method							
The percentages below represent the proportion of PCRs submitted and entered for a specific year compared to the number and proportion once the system is fully operational. In 2015, this equaled 400,000 PCRs or 100% of the expected number under full operation.							
Measure Description							
Number and percent of electronic PCRs submitted and entered at the State level.							
	Base	2010	2011	2012	2013	2014	2015
Goal CY		300,000/50%	400,000/100%	400,000/100%	400,000/100%	400,000/100%	400,000/100%
Final CY		300,000/50%					
Difference:		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
		300,000/25%	400,000/25%	400,000/0%	400,000/0%	500,000/0%	500,000/0%

Injury Surveillance/EMS – Uniformity							
Measure ID: CT-M-00019							
Status		Performance Area		System		Direction	
1-1-07 Required EMS PCR software EMS providers to be Gold NEMSIS compliant.		Uniformity		Injury Surveillance/EMS		Increase	
Measurement							
Improve the uniformity of the Injury Surveillance/EMS core system in terms of an increase in the percent of PCRs in compliance with Gold NEMSIS data requirements where the baseline level was zero before first year funding and goal levels are as presented below.							
Measurement Method							
All NEMSIS data is be collected with Gold standard software. In actuality, the number of NEMSIS data elements captured in each case will depend on the seriousness of the 911 call for service.							
Measure Description							
Number and percent of PCRs where NEMSIS data elements are collected recognizing collection of NEMSIS data is dependent upon the seriousness of the 911 call for service.							
	Base	2010	2011	2012	2013	2014	2015
Goal CY	0	300,000/75%	400,000/100%	400,000/100%	400,000/100%	400,000/100%	400,000/100%
Final CY		300,000/75%					
Difference:		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
		300,000/25%	400,000/25%	400,000/0%	400,000/0%	400,000/0%	400,000/0%

The TRCC's second proposed set of safety data project(s) for performance measurement is in the Crash core system area and the performance areas to be addressed include completeness, uniformity, and timeliness.

The roll out of the new MMUCC PR-1 crash reporting system began on January 1, 2015. First routed to the crash data base at ConnDOT, the new MMUCC PR-1 data is being entered into the State CDR at UConn. The accessibility as well as the data query/canned output reporting tools continue to improve for the CDR. A 10th year Safety Data project will be dedicated to enhancing the functionality of the query tools and canned output toolset of the CDR.

Crash/ConnDOT – Completeness							
Measure ID: CT-M-00001							
Status		Performance Area		System		Direction	
On January 1, 2015, the roll out of the new MMUCC PR-1 crash reporting system began. The new MMUCC PR-1 data is being entered into the State CDR at UConn.		Completeness		Crash		Increase	
Measurement							
Improve the completeness of the crash system in terms of an increase in the number and percent of local road PDO crashes added to the State crash data repository (CDR), where the baseline level was zero before funding and goal levels as presented below.							
Measurement Method							
The number represents the actual of number of electronic PR-1 reports added to the State CDR. The percent represents the portion of expected local road PDO crash reports statewide once the system is fully operational.							
Measure Description							
Number and percent of local road PDO crashes.							
	Base	2010	2011	2012	2013	2014	2015
Goal CY	0	35,000 99%	35,000 99%	35,000 99%	35,000 99%	35,000 99%	35,000 99%
Final CY							
Difference:		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
		0	0	0	0	0	0

Crash – Uniformity			
Measure ID: CT-M-00021			
Status	Performance Area	System	Direction

On January 1, 2015, the roll out of the new MMUCC PR-1 crash reporting system began. The new MMUCC PR-1 data is being entered into the State CDR at UConn.	Uniformity	Crash	Increase			
Measurement						
Measure the improvement in the uniformity of the Motor Vehicle Crash database, as evidenced by the increase in MMUCC-compliant data elements entered into the State crash data repository (CDR) versus the old repository at ConnDOT. Prior to January 1, 2015, only 24 MMUCC-compliant data elements were added to the ConnDOT crash data base. Beginning in January 2015, the number of MMUCC-compliant data elements increased to 75 in the new State CDR. The focus for this comparison was the (77) data elements recommended in MMUCC for law enforcement to collect at the scene of a crash.						
Measurement Method						
Using the basis of the (77) data elements recommended in MMUCC for law enforcement to collect at the scene of a crash, measure totals from the previous PR-1 crash report to the new MMUCC PR-1, implemented beginning on January 1, 2015.						
Measure Description						
Number and MMUCC-compliant data elements added to the State crash data base.						
			2012	2013	2014	2015
Goal CY			24 MMUCC compliant data elements added to ConnDOT database	24 MMUCC compliant data elements added to ConnDOT database	24 MMUCC compliant data elements added to ConnDOT database	75 MMUCC compliant data elements added to State CDR database

Citation/Adjudication – Timeliness							
Measure ID: CT-M-00009							
Status		Performance Area		System		Direction	
Underway		Timeliness		Citation/Adjudication		Increase	
Measurement							
Improve the timeliness of the citation/adjudication data system in terms of an increase in the percent of citations received by CIB/the courts within 14 days of any electronically issued citation (<i>related to CT-M-00002</i>).							
Measure Description							
Percent of electronic citations received by the CIB/courts within 14 days.							
	Baseline	2010	2011	2012	2013	2014	2015
Goal CY	-	99%	99%	99%	99%	99%	99%

Final CY							
Difference:	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015		

Citation/Adjudication – Timeliness							
Measure ID: CT-M-00002							
Status		Performance Area		System		Direction	
Underway		Timeliness		Citation/Adjudication		Increase	
Measurement							
Improve the timeliness of the citation/adjudication system in terms of an increase in the percent of citations received by courts/CIB within 10 days.							
Measure Description							
Percent of citations received by courts/CIB within 10 days.							
	Baseline	2010	2011	2012	2013	2014	2015
Goal CY	-	85%	90%	95%	99%	99%	99%
Final CY							
Difference:		2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	

Citation/Adjudication – Timeliness							
Measure ID: CT-M-00009							
Status		Performance Area		System		Direction	
Underway		Timeliness		Citation/Adjudication		Increase	
Measurement							
Improve the timeliness of the citation/adjudication system in terms of an increase in the percent of citations received by the courts/CIB within 14 days (<i>related to CT-M-00002</i>).							
Measure Description							
Percent citations received by courts/CIB within 14 days.							
	Baseline	2010	2011	2012	2013	2014	2015
Goal CY	-	99%	99%	99%	99%	99%	99%
Final CY							

Difference:	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015

Citation/Adjudication – Timeliness							
Measure ID: CT-M-00010							
Status		Performance Area		System		Direction	
Underway		Timeliness		Citation/Adjudication		Increase	
Measurement							
Improve the timeliness of the citation/adjudication system in terms of an increase in the percent of cases transferred from CIB to courts that are processed within 90 days of receipt.							
Measure Description							
Percent of cases transferred from CIB to courts that are processed within 90 days of receipt.							
	Baseline	2010	2011	2012	2013	2014	2015
Goal CY	-	80%	85%	90%	95%	95%	95%

Citation/Adjudication/Driver – Timeliness			
Measure ID: CT-M-00011			
Status	Performance Area	System	Direction
Underway	Timeliness	Citation/Adjudication	Increase
Measurement			
Improve the timeliness of the citation/adjudication system in terms of an increase in the percent of convictions sent to DMV within 10 days of the conviction.			
Measure Description			
Percent of convictions sent to DMV within 10 days of the conviction.			

Citation/Adjudication – Integration			
Measure ID: CT-M-00003			
Status	Performance Area	System	Direction
Underway	Integration	Citation/Adjudication	Increase
Measurement			
Improve the integration of the citation/adjudication system in terms of an increase in the percent of TCAS citation data linked to DMV license information.			
Measure Description			
Percent of TCAS citation data linked to DMV license information.			

Citation/Adjudication – Integration			
Measure ID: CT-M-00004			
Status	Performance Area	System	Direction
Underway	Integration	Citation/Adjudication	Increase
Measurement			
Improve the integration of the citation/adjudication system in terms of an increase in the percent of TCAS citation data linked to CIB.			
Measure Description			
Percent of TCAS citation data linked to the CIB.			

Citation/Adjudication/Vehicle – Integration			
Measure ID: CT-M-00012			
Status	Performance Area	System	Direction
Underway	Integration	Citation/Adjudication	Increase
Measurement			
Improve the integration of the citation/adjudication system in terms of an increase in the percent of TCAS citation data linked to DMV vehicle registration information.			
Measure Description			
Percent of TCAS citation data linked to DMV vehicle registration information.			

Citation/Adjudication/Crash – Integration			
Measure ID: CT-M-00013			
Status	Performance Area	System	Direction
Underway	Integration	Citation/Adjudication	Increase
Measurement			
Improve the integration of the citation/adjudication system in terms of an increase in the percent of crash related citation data linked to crash data.			
Measure Description			
Percent of crash related citation data linked to crash data.			

Citation/Adjudication – Integration			
Measure ID: CT-M-00014			
Status	Performance Area	System	Direction
Underway	Integration	Citation/Adjudication	Increase
Measurement			
Improve the integration of the citation/adjudication system in terms of an increase in the percent of vehicular misdemeanors and arrests linked to the criminal record and motor vehicle system			

(CRMVS).
Measure Description
Percent of vehicular misdemeanors and arrests linked to the CRMVS.

Citation/Adjudication – Accessibility			
Measure ID: CT-M-00005			
Status	Performance Area	System	Direction
Underway	Accessibility	Citation/Adjudication	Increase
Measurement			
Improve the accessibility of the citation/adjudication system in terms of an increase in the percent of data and system availability.			
Measure Description			
Percent of data and system availability.			

Project Summaries / 7th Year (2012 – 2013)

Considerable emphasis for traffic records system improvements continues to focus on mobile reporting of traffic citation and motor vehicle crash data by law enforcement in the field. Outlined in a recent Business Plan for Law Enforcement Data Systems, safety data improvements for E-Crash and E-Citation are closely tied together. Also important is the incident location for all safety related events, which are better linked through an improved digital roadway network base map.

The projects proposed by the TRCC for the 7th year Section 408 application include:

- Electronic Crash Reporting Using National Standards (E-Crash)
- 100% Electronic Submission of Crash Reports
- Crash Data Repository (CDR)
- Electronic Citation Processing System (E-Citation)
- Electronic Citation Pilots – State Law Enforcement
- Electronic Citation Pilots – Local Law Enforcement

- Digital Roadway Network (DRN)
- Impaired Driver Records Information System (CIDRIS)
- Electronic Patient Care Reporting (EMS/PCR)
- Crash Outcome Data Evaluation System (CODES)

Electronic Crash Reporting Using National Standards (E-Crash)

Project ID: CT-P-00015

Core System:

- Crash

Performance Area:

- Completeness
- Uniformity
- Accuracy
- Timeliness

Project Title: Electronic Crash Reporting Using National Standards (E-Crash)

Lead Agency: Capitol Region Council of Governments

Partner Agencies:

- State Department of Transportation
- State and Local Law Enforcement

Project Director/Primary Contact:

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Project Description/Basis:

The application, a part of the CT: CHIEF records management system (RMS) is being developed by the Capitol Region Council of Governments (CRCOG). That system which is browser based will be offered to communities without license fees. No local servers will be required. The application will provide an optional stand-alone Crash module for law enforcement agencies (LEA) to incorporate as a “front end” to their existing RMS systems. CRCOG would provide the stand-alone module to ConnDOT to distribute to the LEAs.

System hosting for the CT: CHIEF RMS is provided on an extensive server suite at the City of Hartford Police Department. The application is being developed using video based help services as well as conventional help text. Project principals will assist on the video preparation and video training. The system will be interfaced with the ConnDOT/UConn Crash Data Repository (CDR) initiative which will back feed the crash records in the legacy PR-1 format to provide a consistent reporting approach as different police departments begin to conduct pilot tests for their jurisdictions. The application will provide a crash report for those involved, a motorist information exchange, and an e-mail notification of the information exchange.

Training for end users will be provided on a train the trainer basis and led by Sergeant Robert Martin of the New Britain Police Department. Sgt. Martin is a certified instructor and is a member of NHTSA's MMUCC committee.

Finally, the project will develop a series of standard query language (SQL) based management reports dealing with crash location analysis, crash and enforcement matrices, iterative target creation and monitoring, and enforcement activities by user and by police agency.

This project satisfies ConnDOT's need for an updated crash data collection tool that meets national standards as well as an accelerated means of reporting from local agencies. By linking technology from other resources (COLLECT, CAPTAIN, DMV, Digital maps) it is expected that the added time to collect additional data at higher quality levels will be offset by the ability to import large amounts of crash detail (operator names, vehicles, street names and intersections, event dates and times) rapidly and with modest user intervention. Importantly, the application attempts to conserve valuable police time by only posing questions specifically related to the type of crash under investigation.

Recurring costs associated with the CRCOG approach include a share of the annual maintenance fees and a small contribution to the enhancement fund. In addition, there is a cost associated with the crash diagramming tool and the crash locator tool. The crash locator tool can be licensed once by the State of Connecticut for all law enforcement agencies at a recurring cost of \$17,000 annually. The diagramming tool in browser format has a unit cost of less than one hundred dollars with annual maintenance of 18%.

The system presumes that local agencies already have a reasonably up to date personal computer and wireless service for each vehicle and a laser printer in their police stations for printing reports.

There are some savings to the State of Connecticut as well. These include a reduction in the cost of printing paper forms, the entry of data from those reports, and management of an extensive paper records process. The avoidance of these costs can easily fund extensions of the pilot to other regions and support a statewide e-crash effort.

Background:

The existing Connecticut crash reporting system is based on a design formed from paper records. At its base is the accident report, form PR-1. This form has been largely unchanged in the past thirty years. The system flow has been the creation of the paper form by the police accident investigator, printing or copying the actual document followed by mailing the report document to the Department of Transportation for coding and data entry. This legacy system has extensive mainframe based edits that are difficult to enforce in a manual environment and efforts to automate these edits have met with varied levels of success. There is even some anecdotal information that local and state police agencies are frequently compelled to disable the edit facilities in favor of being able to simply complete the document in a timely fashion. The current PR-1 form does not meet the latest national standard for crash data collection entitled, Model Minimum Uniform Crash Criteria. The MMUCC standard is close to its fourth iteration and has gained substantial credence across state highway safety organizations. Moreover, MMUCC data elements have recently been accepted by the National Information Exchange Model (NIEM) program as a national standard.

Only one Connecticut reporting vendor has developed an automated interface to directly update the records of the Department of Transportation. While this vendor has a large market share; there are substantial costs associated with trying to implement such a system from a statewide perspective.

Accordingly, a browser based system that does not have significant licensing fees is an attractive alternative. This would relieve local police agencies of the need to have extensive and expensive server based facilities and staff to operate a stand-alone records management system. Instead, there is a

growing emphasis of resource and service sharing at the local level. Hence, agencies might share a single system with access available by browser rather than by either thick or thin client software. It is in this environment that this proposal recommends a comprehensive crash reporting capability with linkages to electronic citation, DMV records, digital maps, a proven crash diagramming tool, and a nationally certified crash location product.

Goals and Objectives:

- To develop a means of timely crash reporting that follows national standards;
- To create an easy to use data collection mechanism that conserves valuable police time while collecting additional mission critical and research critical crash data;
- To integrate the E-Crash facility with the existing E-Citation system so as to enable a spatial relationship between crash locations and enforcement activities;
- To improve the accuracy of crash locations to within a 25 foot radius using coordinate technologies enabled through digital maps and advanced browser technologies;
- To provide management information to traffic safety principals and law enforcement executives on a timely basis; and
- To provide a proof of concept pilot program for the use of browser-based, paperless reporting using smart navigation and data collection systems across a diverse set of law enforcement users and geographies

Project Milestones:

Tasks/Milestones	Projected Completion Date
Submit HS-1 grant application to ConnDOT, Highway Safety Office	9-01-2012
Select recipient law enforcement agencies in advance and	9-15-2012
Finalize HS1 agreement with the State of Connecticut Highway Safety Office.	10-15-2012
Meet with pilot towns/agencies and determine the number of officers/vehicles in each town to participate in the e-crash pilot test	11-15-2012
Provide training in use of e-crash data capture software, and printers.	1-30-2013
Test applications in preparation for pilot towns going live with their e-crash pilots.	2-15-2013
Initiate the pilot and begin to upload collected crash data to the law enforcement server	3-01-2013
Upload crash data from the law enforcement server to the CDR at UConn	3-15-2013
Continue to provide necessary training and support.	3-30-2013
Employ a survey instrument for users of the e-crash pilot system: <ul style="list-style-type: none"> • To assess the satisfaction level of the users participating in the pilot; • To assess their impressions of productivity improvements; • To assess citizen satisfaction with the system. 	7-30-2013

Projected Budget by Funding Source:

Funding Source	2007	2008	2009	2010	2011	2012
NHTSA 408						75,000
Local Funds						18,750
Total Funds						93,750

Project Status:

As stated in the 6th year project status, this project is helping to continue the roll out of e-crash systems in law enforcement agencies statewide.

Current progress includes:

- Demonstrations of E-Crash were provided for:
 - User group in November 2012
 - TRCC in December 2012
 - CJIS in January 2013
- Demonstrations:
 - E-Crash is an electronic crash reporting application for collecting and processing traffic accident reports within Connecticut
 - CT:CHIEF is a browser-based RMS that organizes, stores, and transmits secure law enforcement and public safety information
 - CJIS Hosting refers to the work activities necessary to plan, install, and maintain E-Crash and CT:CHIEF applications
- Current baseline uses Bing maps for Crash locations and Easy Street for diagrams
- User Test and Pilot environments readiness
- Fine tuning for Survey/Reference data setup
- Continuing to issue training materials, and user manuals to police departments;
- Participating agencies have the ability to immediately reference motor vehicle statutes; operator license information; integrate DMV operator and registration information into the crash; and forward an electronic copy to CDR at UConn for processing
- e-Crash will speed the crash-recording process, reduce errors in both recording crash data and record-keeping steps, and increase the completeness of collected data
- When the collection of crash data is integrated into the mobile application, timeliness, accuracy and completeness will extend to that procedure as well; towns will have access to the data and be able to make informed decisions about spending funds for safety improvements
- Collected crash data uploaded to the centrally located CRCOG server; crash electronically transmitted along with paper copy to CDR at UConn
- Coordination with pilot towns (New Britain, Hartford, Waterford, Orange, Glastonbury, Windsor, South Windsor, Enfield, East Hartford, and Newington) is helping to expedite e-crash start-up

In addition, an extension of the crash application will be made available to non-CAPTAIN mobile data users via an electronic interface. This will allow the software to be used by more communities without requiring additional custom applications.

Crash Data Repository (CDR)

Project ID: CT-P-00003

Core System: Crash

Performance Area:

Integration
Completeness
Timeliness

Project Title: Crash Data Repository (CDR)

Lead Agency: University of Connecticut

Partner Agencies:

All stakeholder agencies listed on the Traffic Records Coordinating Committee

Project Director/Primary Contact:

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Project Description:

The purpose of this project is to enhance the Connecticut Crash Data Repository (CTCDR), data query and analysis toolset created in earlier phases of this study. The overall project goal is to provide members of the traffic-safety community with timely, accurate, complete, and uniform crash data that are integrated with other databases maintained in the state. The Crash Repository designed at the University of Connecticut compiles data from agencies in Connecticut that capture PR-1 accident data and provides users access to these data along with analysis tools. The system is currently designed to allow users access to two individual data repositories. The first repository is collected from the Connecticut Department of Public Safety (DPS) and the second repository is generated from accident data processed by the Connecticut Department of Transportation. Phase 3 efforts are directed to:

1. Adding additional functionality to the web portal of the repository as directed by the technical advisory committee,
2. Including performance measures for records assessment and management
3. Incorporating more local police department crash reports (electronic XML) into the repository and;
4. Updating the CTCDR to accept and allow query of MMUCC compliant data captured as part of the Capital Region Council of Governments (CRCOG) e-crash pilot project.

Basis for Project:

Analysis of highway safety is probably the most data-intensive activity carried out by highway and transportation agencies. It requires more than just archiving police accident reports. To be effective, information recorded on the accident reports must be captured into a searchable database. Furthermore, roadway inventory, traffic volumes and even land use information are all critical for evaluating the safety of any road segment or intersection. These were added as part of phase 3 of the CTCDR. However, other safety analysis exercises require data such as driver history, motor vehicle registration information, and vehicle miles traveled (VMT). Furthermore, other institutional databases such as patient care reporting and treatment received on the scene and at the hospital are important to understanding the full impact of a crash. Due to the sensitive nature of these types of data, discussions need to take place early and often to identify the potential risks and benefits to such an integrated database. These types of discussions will be a key part of phase 3 of the CTCDR; so that a future version of the repository may include such linkages to allow for a complete crash analysis from time of impact to release from hospital for injury crashes.

Phase 1 and 2 of this project established a repository structure which provides users online access to these repositories through a common integrated portal. As part of the Crash Data Improvement Program (CDIP) review performed at ConnDOT in October of 2011, the need for performance measures was identified. These measures would track elements such as timeliness, completeness and accuracy. These tools will be built into the next generation of the CTCDR.

Phase 1 and 2 of this project provided users with access to the crash data. However, the data entered into the repository from ConnDOT is not timely. There is currently a 14 month backlog of paper PR-1 reports at the DOT. Phase 2 established an XML feed from DPS to get data into the repository in a more timely fashion. However, this feed only contains data from the state police. In an effort to get more data submitted electronically local police departments need the ability to submit data via an XML data feed. This will aid in eliminating the PR-1 paper backlog as well as providing users access to more timely data. The research team will pick 5 pilot towns at a minimum to aid in their submission of electronic PR-1 data. This would involve the research team assessing a local PDs current system and creating a custom application to generate an XML feed directly and securely to the crash data repository.

A recent initiative at the DOT is the transition to a 100% MMUCC compliant uniform police report. This initiative also includes an effort to move to 100% electronic reporting. The DOT has funded a pilot project with CRCOG as a proof of concept. As part of their pilot crash data is to be collected with the new browser based tool. However, the DOT is not equipped to receive a MMUCC XML data feed. Therefore the CTCDR is to be updated to accept and process a MMUCC XML file. This change requires a redesign of the CTCDR and the analysis tools. Furthermore, the option of an electronic export to the DOT crash file system is being investigated. This could relieve the DOT in the future from having to enter these reports manually from printed police reports.

Following a Peer-to-peer program with the Connecticut DOT involving the DOT and LSU representatives from the State of Louisiana, Connecticut is looking to pattern much of its University/DOT relationship in a similar fashion to the model developed for the State of Louisiana. The CTCDR (Connecticut Crash Data Repository) is migrating to the CTSRC (Connecticut Transportation Safety Research Center).

The mission of the CTSRC is to support the Department of Transportation in developing and maintaining a state of the art crash data entry, collection, and safety analysis system. Refer below to progress for the most recent month.

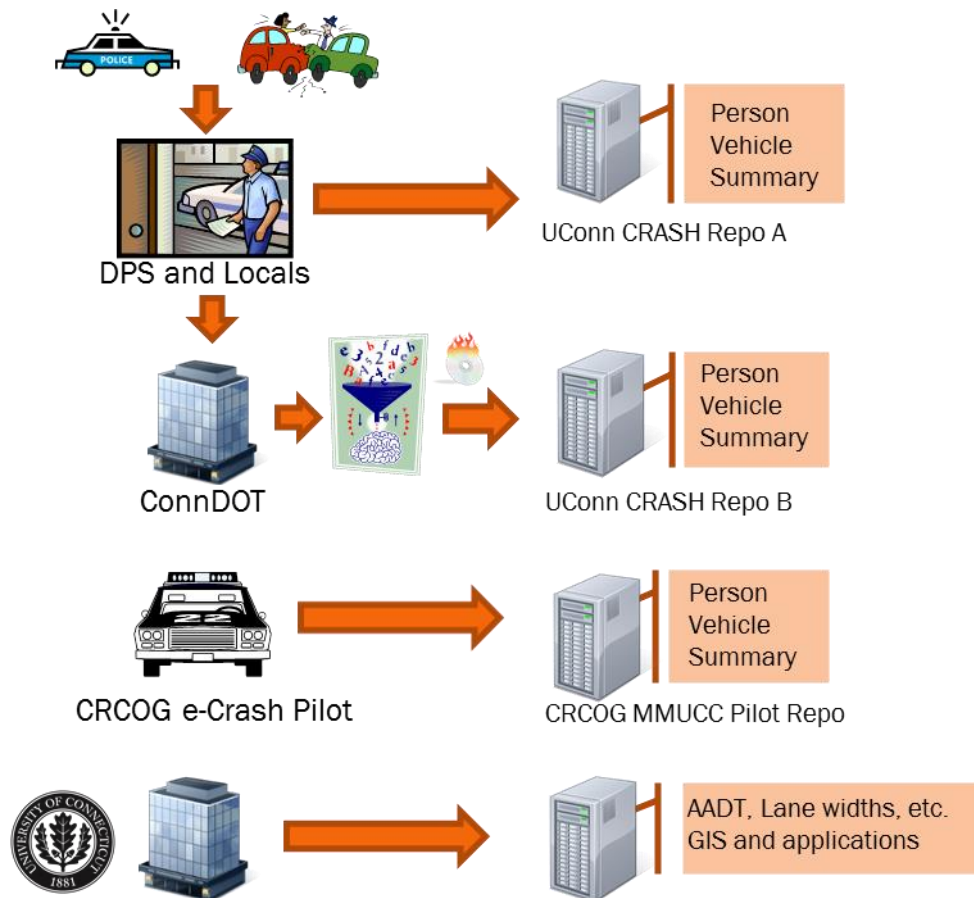


Figure 1: Proposed CDR Structure to Include the CRCOG MMUCC Data

As Figure 1 outlines, users are able to query crash records by information contained on the PR-1; in addition, they will be able to query the data based on the physical characteristics of the highway network. The revisions to the repository will establish a MMUCC repository that will be able to accept MMUCC compliant XML files and then make summaries of the data available through the web portal. Select users will have access to the raw data collected from the XML feed from CRCOG.

Vision for the Future:

Future advancements of the established repository will be proposed in subsequent years if funding is available. There are large amounts of non-highway information maintained by other State agencies such as the Department of Motor Vehicles or the Department of Public Health that could populate a fourth or fifth repository at UConn. Future phases of this research could work to link or merge the Patient Care Reporting (PCR) software and DMV driving records to the crash data repository. This would allow users access to not only crash data but limited generalized summaries of injury reports detailing the care provided to and the severity of the injuries to crash victims. Users may also be able to generate summaries of crashes based on a driver's driving records obtained from the DMV. For example, this type of system would allow for analysis of a driver's DUI convictions and associated alcohol related crash frequency or potential. However, there are many privacy concerns with this type of data. Significant effort and resources will be needed to meet *Health Insurance Portability and Accountability Act (HIPAA)* requirements.

Expected Impact:

Completion of Phase 3 of this project will enhance the crash data repository created in Phase 1 and 2. This enhanced repository will provide members of the traffic-safety community with timely, uniform and complete crash data, within 30 days of the crash event, by expanding the data options in the repository established at the University of Connecticut. Furthermore, the integration of local police department xml data feeds will provide users with more timely data and aid in the reduction of the paper PR-1 backlog.

Project Milestones:

Tasks/Milestones	Projected Completion Date
Submit HS-1 grant application for 7th year Section 408 project	9/15/2012
Receive approval of the HS-1 and initiate project	10/1/2012
Establish/confirm the technical advisory committee (TAC) membership to establish user requirements and functionality for Connecticut's Crash Data Repository	10/15/2012
Identify local PDs that would be willing and interested in being part of the electronic XML pilot	1/20/2012
Design updated crash data repository structure for MMUCC data repository	2/1/2013
Update design specifications for integration of MMUCC databases into crash repository and analysis structure	4/1/2013
Update web front application to provide users new options in data query and analysis.	5/1/2013
Crash database repository database modifications complete	6/1/2013
Web access and analysis programming complete	7/1/2013
Web front application programming complete	8/1/2013
Pilot application launch available for TRCC and TAC comments	8/1/2013
CDR launched for use in Connecticut	9/30/2013

Projected Budget by Funding Source:

Funding Source	2007	2008	2009	2010	2011	2012
NHTSA 408	12			225,900	168,400	200,000
Match				57,800	42,100	50,000
Total Funds				283,700	210,500	250,000

Status/Progress

- PR-1 Crash Report Backlog Reduction and Removal: Currently, the CTSRC has 27 undergraduate coders on staff, each working on average, 12 hours a week. The CTSRC has completed February 2012 paper crashes and are halfway through coding March 2012 crashes into the ConnDOT CAS software. Over half of the April 2012 crashes have been scanned and are ready for coding.

- Backlog / continued: For the month of January: UConn coded 5,948 police reports. The average coder was able to code 10 reports an hour. With students back on campus full time, it is expected that they should be able to code a minimum of 8,000 crash reports; with the ultimate goal of 12,000 crash reports coded in a month.
- Crash Data Repository: Pending a start date for an expected computer programmer position, the CTSRC has borrowed a fulltime programmer from the computer science department to start working on the repository. UConn is working with ConnDOT to develop and define the MMUCC database and XML schema. Plans are to introduce a new user interface for the CDR.

Upgrades to the CDR include: a) the ability to access the DOT photolog images with a single click to show the crash location in the year of the crash, 2) expanded graphing and summary capabilities for query users, 3) GIS mapping for crashes on state routes, 4) GIS display and query capabilities, and 5) new advanced data export tools to allow users to download their query results.

- CDR / continued: Performance measures – The team is drafting a real-time dashboard to allow users to see crashes as they are entered into the MMUCC database. This will also track how frequently data are updated to the system and how long files dwell before they are edited and processed into the final repository.
- Technical Advisory Committee (TAC): A second TAC meeting is being planned for late March 2013. The TAC advises the CTSRC in many issues ranging from efficient tools for the collection and analysis of crash data, to query capabilities and options for the CDR website.
- Crash Data Champion: The Data Champion has continued to work on Crash Data Improvement (CDIP) project tracking and continues to detail his activities and CDIP progress.
- E-Crash: The team viewed a demonstration of the E-Crash Software and has met with CRCOG, CJIS and ConnDOT to start discussions of data elements and structure of the MMUCC compliant database necessary to receive pilot crash data.
- Established a flow of PR-1 data through the State IT network using the BEST SFPT server. To date 37 XML files, totaling approximately 40,000 electronic PR-1 crash reports have been received by UConn from DPS. The XML files have been used to create a parser to populate a SQL database, which is being incorporated into the repository web tool.
- Road inventory data (lane width, pavement, ADT and other roadway data for last 16 years) to be reformatted and incorporated into an SQL database for inclusion in the Web GUI.
- The repository can be found at www.ctcrash.uconn.edu

Electronic Citation Processing System (E-Citation)

Project ID: CT-P-00009

Core System:

- Citation/Adjudication

Performance Area:

- Completeness
- Uniformity
- Timeliness

Project Title: Electronic Citation Processing System (E-Citation)

Lead Agency: State of Connecticut Judicial Branch – Court Operations, Centralized Infractions Bureau

Partner Agencies:

- State and Local Law Enforcement Agencies

Project Director/Primary Contact:

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Project Description:

The citation system in Connecticut was a manual system, vulnerable to human error. Information from handwritten tickets was data entered and subsequently transmitted to various entities. Exception processing was time consuming. An electronic method of creating tickets and populating the CIB database is leading to improved processing times and accuracy of the information processed.

This project is dedicated to the continued development of an application that enables the receipt by the Centralized Infractions Bureau (CIB) of electronically captured citation data, automatically populated into the CIB system, leading to a paperless court in Connecticut for processing infractions. The project serves as a complement to all law enforcement citation pilot efforts statewide through ultimately building a back-end process for electronic traffic citations.

- Background - CIB; Unified Court System; 250 LE Agencies; 425,000 Tickets per Year; Lock Box Payment
- Project Focus - Timeliness; Accuracy; Technical Agility to Respond to Public Policy Changes; Better Performance Measures

- Manual Limitations - Ticket Inventory; Road Conditions; Legislative Change; Legibility; Arithmetic Errors
- Timeframe - Analysis for Ticket Returns
- Ticket Errors - Wrong Amount Due; Wrong Infraction Number; Wrong Amt for Infraction
- Successes - Collaboration; Proof of Concept Widely Accepted; First Utilization of e-Signature; Impetus for e-Pay/Plead
- Challenges - Broaden User Base; Demand for Multi-Uses for Mobile Printer; Crash Info Exchange, Summons, Parking Tickets, Warnings

Goal:

Create an application that enables the Judicial Branch's Centralized Infractions Bureau (CIB) to electronically receive traffic citation information from law enforcement agencies, automatically store information in the CIB citation database, and electronically process citations.

Objective: Enable the e-citation application to accommodate Commercial Citations.

Objective: Enable the e-citation application to allow electronic viewing and disposition of citations in court locations.

Objective: Enable the e-citation application to provide a "paperless courtroom" with dedicated dockets for citations and enhanced opportunities for electronic "self-pay" options.

Purpose:

- Streamline citation system process through applied technology
- Increase revenue
- Increase uniformity of infractions processing
- Utilize staff more efficiently
- Assist law enforcement initiatives

Tasks/Milestones:

1. Submit/finalize HS-1 grant application to ConnDOT, Highway Safety Office;
2. Production of electronic-citation data submitted by law enforcement resulting in automatic population into CIB database;
3. Document volumes and define hardware/software needs;
4. Architecture design;
5. Web services application;
6. Streamlining of CIB workflow; and
7. Longer term enhancements may include absorbing additional jurisdictions and/or the creation of more e-Infractions courts.

Application:

Overview - Software; In-Car Equipment; Data Communications Network; Citation Forms/Zebra Printer

Rollout - # Printers; LE Agencies; Thermal Paper; Train-the-Trainer; Feedback from Pilot

Mgmt Reports; Monthly by Officer; by Violation Type; by Location; Separate Data Set – Map Based Analysis

Preparation for Each Agency; Equipment/Software in Vehicle; Regis ORI with e-Citation; Test System; Train Officers

CRCOG Users/e-Citation; Windows Style e-Citation Interface; Main Menu Functions

New Citation; Citation Search; Print; User Preferences; Clear Search Queues

Process; Demographics; License/Vehicle; Specifics; Infractions/Fines; Notes; Preview; Sign-Save-Print

Successes; User Accepts; App Sharing Across Jurisdictions; Potential for Other Mobile Ticket Apps

Challenges; Budget Limits Broader Rollout; Towns Slow to Rollout “Seed” Units; Long Term Issue of Replacement Costs; Revenue Sharing to Cover Costs - Strong Potential

Projected Budget by Funding Source:

Funding Source	2007	2008	2009	2010	2011	2012
NHTSA 408	75,000	75,000	75,000	150,000	100,000	75,000
Match	19,000	19,000	19,000	37,500	25,000	19,000
Total Funds	94,000	94,000	94,000	187,500	125,000	94,000

Status:

The Electronic Citation Processing System is creating efficiencies in several areas. The receipt of electronically captured citation data by the CIB, is leading to the data being automatically populated into the CIB automated system.

In Phase One, officer handwriting is being replaced by type-written characters, therefore eliminating entry errors. Fewer entry errors are resulting in less exception processing, which improve the timeliness of downstream processing transmissions to the Courts and the Department of Motor Vehicles.

Phase Two, including activities allowing for direct population of the CIB database, further minimizes data entry, key stroke errors, and exception processing.

Phase Three will allow for the expansion of e-Citation processing, further developing the application to accommodate Commercial Citations, and the electronic viewing and disposition of citations in court locations. This phase will also begin the development of an e-Citation paperless courtroom with dedicated dockets for citations and will enhance the availability of electronic, self-pay opportunities.

Progress:

Activities have been completed and coordinated in conjunction with the Department of Public Safety, CROG and CIDRIS initiatives.

As highlighted, in regards to recent pilot-testing involving State and Local law enforcement, progress includes:

- Prototype for e-Citation back-end process/system has been developed
- System being developed as a real-time/web-based application
- CIB still debugging production problems as they occur from the State Police
- CIB beginning development on streamlining the citation workflow. This involves taking the e-Citations received and automatically uploading them into the legacy system
- Currently, CIB is receiving the citations electronically and printing and scanning them, then performing data entry from the now-typed citations
- Continuing to meet with various stakeholders to review adjusted timeline(s), expectations and responsibilities
- e-Pay component, a web-based automated system to electronically accept credit card payments for infractions and certain payable violations, now operational – is targeted for June to be able to allow violators to pay multiple tickets, rather than requiring individual transactions per ticket

Performance Measures

- Total tickets issued: 425,000
- Total tickets issued electronically: 45,000
- Total tickets entered electronically: 2,100

- Pre-Program: Average number of days from issuance to receipt – 28 days
- Pre-Program: Error rate – 11%

- Phase I: Average number of days from issuance to receipt – 4 days
- Phase I: Error rate – 5%

- Phase II: Average number of days from issuance to receipt – 4 days
- Phase II: Error rate – 1.5%

- Phase III: Average number of days from receipt to data entry – 7 per 1,000 tickets (anticipated)
- Phase III: Average number of minutes from receipt to data entry – 120 per 1,000 tickets “

Interim Progress Report

Based on an Interim Progress Report¹³, submitted to NHTSA - January 2013 for Section 405 application -

Connecticut's March 2013 **Determination of Measurable Progress by Connecticut** was based on:

The timeliness of the Citation/Adjudication database improved, as evidenced by the decrease, from 19.03 days during July-September 2012, to 15.61 days during October-December 2012, in the average number of days from citation issuance by the Connecticut State Police to entry of the citation record into the Centralized Infractions Bureau database. Because this improvement occurred within the 12 months immediately preceding the FY 2013 due date for applications for State Traffic Safety Information System Improvements Grants in FY 2013, it was determined to be a demonstration of current progress.

E-Citation Pilots - State Law Enforcement

Project ID: CT-P-00010

Core System:

- Citation/Adjudication

Performance Area:

- Completeness
- Accuracy
- Timeliness

Project Title: E-Citation Enhancement for Connecticut State Police

Lead Agency: Department of Public Safety / Division of State Police

Partner Agencies:

- State Judicial Department

Project Director/Primary Contact:

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Project Description:

This project continues the deployment of e-Citation systems for the Connecticut State Police. Mobile data capture software has already been developed for the existing e-Citation effort. Printers, and other required software and/or peripheral devices are being installed in State Police vehicles.

Grant funds are being requested to purchase at least one hundred (100) mobile printers and other peripheral devices for Connecticut State Police vehicles. Once vehicles have been equipped with the required hardware, and related software/peripherals, State Police personnel use their e-Citation application to electronically upload collected citation data to the State Police server and then to the State of Connecticut's Judicial Department, Centralized Infractions Bureau (CIB).

Basis for Project:

Automated citation data collection is only available in a few law enforcement jurisdictions. Collection and submission of citation data in the paper (manual) format is largely an inefficient process.

Additionally, the use of the e-Citation software reduces data input errors and improves the completeness of the collected data. In the pilot phase, it has also proven to increase police officer efficiency by reducing the amount of time that officers spend collecting citation data and decrease the time it takes this data to

be received by the courts. The law enforcement server interface provides a direct link for law enforcement officers to query driver licensing and vehicle data as well as provide a secondary linkage to emergency responders (i.e., EMS, fire, etc.).

Expected Impact:

Expected impacts include:

- Expand management information and targeted enforcement activities
- Improved timeliness of the availability of citation data to the courts
- Improved accuracy and completeness of collected and submitted citation data

Project Milestones:

Tasks/Milestones	Projected Completion Date
Submit/Finalize HS-1 grant application to DOT, Highway Safety Office.	10/01/12
Determine the number of officers/vehicles to be equipped with the e-Citation pilot system.	10/15/12
Purchase/provide officers with necessary hardware/software applications.	11/01/12
Install applications in vehicles, including printers and software.	2/15/13
Provide training in use of e-Citation data capture software, printers.	2/01/13
Conduct tests to monitor e-Citation applications with increased users / volume.	4/30/13
Upload collected citation data to the State Police server.	4/30/13
Upload citation data from the law enforcement server to the Centralized Infractions Bureau.	4/30/13
Continue to provide necessary training and support.	2/15/13

Projected Budget by Funding Source:

Funding Source	2007	2008	2009	2010	2011	2012
NHTSA 408		25,000		50,000		100,000
Local Funds		6,250		12,500		25,000
Total Funds		31,250		62,500		125,000

Status:

Grant funds are being requested for this 7th Year Section 408 Grant. The DPS will continue the roll out of e-citation systems for the State Police. A law enforcement server interface provides linkage for law enforcement to query driver licensing and vehicle registration data, populating the e-citation. Once the officer has generated an e-citation, it is electronically sent to the Centralized Infractions Bureau's automated system.

Performance Improvements:

State Police 1200 Troopers; Primary Law Enforcement - all Limited Access Highways

Exclusive Jurisdiction in 61 Largely Rural Towns; Concurrent Jurisdiction in all 169 Towns

Every Troop is assigned a Vehicle with a Mobile Data Computer

Hand Written vs. e-Citations

60% Increase (select Time Period) e-Citations Issued vs. Written

Successes Extraordinarily Efficient (4-7 Minutes per Citation)

Substantial Potential for Revenue Enhancement

Wide Acceptance; Common Approach Sponsored by Judicial

Challenges > 500 Printers Needed

Furnish All Vehicles and Create a Uniform Process

Training - Need to Formalize; Bigger Classes Needed; Budget Issues

E-Citation Pilots - Local Law Enforcement

Project ID: CT-P-00011

Core System:

- Citation/Adjudication

Performance Area:

- Completeness
- Accuracy
- Timeliness

Project Title: E-Citation Pilot for Local Law Enforcement

Lead Agency: Capitol Region Council of Governments

Partner Agencies:

- State Judicial Department
- State Department of Transportation

Project Director/Primary Contact:

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Project Description/Basis:

This project continues the roll out of e-citation systems in law enforcement agencies. Software has already been procured for the existing e-citation efforts and printers, and other appropriate hardware/software has been installed in police vehicles.

The requested grant funds have been used to purchase mobile printers, and other appropriate hardware for select law enforcement vehicles. Once vehicles are equipped with the required hardware, law enforcement personnel use e-citation software developed under previous year Section 408 initiatives. Citation data is electronically uploaded to the appropriate law enforcement servers. These servers then upload the citation data electronically to the appropriate State of Connecticut agency servers via XML specification standards.

The use of the e-citation software reduces data input errors and improves the completeness of the collected data. It also improves police officer efficiency by reducing the amount of time that officers spend collecting citation data and decreases the time it takes this data to be received by the appropriate State agency.

Background:

Police efficiency is substantially hampered by the inability to cite violators associated with crashes and selective enforcement in an automated fashion. Moreover, this presents a systemic challenge to the enforcement system in that it compels substantial and delayed ticket entry and disposition by the state's judicial system. While improvements can be incremental, an electronic citation system is best accomplished as a cradle to grave ticketing system involving all parties from the outset.

In conjunction with the leadership of the Traffic Records Coordinating Committee, the State of Connecticut Judicial Department initiated a pilot electronic citation program. This program has the support of the Department of Public Safety and the Department of Transportation along with local law enforcement. In the past year, the Judicial Department has resolved issues regarding an electronic citation format and the paper document upon which the citation is printed. Moreover, mobile printers have been identified and tested. While these may seem like small migratory tasks, they are vital steps toward the development of an all-electronic citation system that will provide not only automated ticketing and docketing, but eventually full payment and Department of Motor Vehicles' adjudication of the infractions.

Expected Impact:

Expected impacts include:

- Expand management information and targeted enforcement activities in equipped municipalities
- Improved timeliness of the availability of citation data to the courts
- Improved accuracy and completeness of collected and submitted citation data

Goals and Objectives:

Technical Objectives:

This project builds on prior investments of the State of Connecticut Department of Transportation.

1. The electronic citation applications provide:
 - Ability to reference the motor vehicle statute files maintained by the Connecticut Judicial Department.
 - Swipe or scan operator license information from crash participants or violators.
 - Integrate DMV operator and registration information to the citation.
 - Print a citation for the violator; forward an electronic citation to the Judicial Department's Central Infractions Bureau; and as an interim step, print a hard copy of the citation.
2. Using existing hardware and communications facilities, this system will provide a GPS reference on all electronic crash records and citations.

Tasks/Milestones:

1. Provide "train the trainer" instruction to selected individuals from participating towns, who will in turn train the police officers in their communities in the operation of the equipment and the full e-citation application.
2. Local law enforcement records management system, being initiated, contains the standard for the XML interface for crash reporting. Select towns will send all of their crash reports through the new system by the end of 2013

3. As an adjunct to the e-Citation project, a records management system will be made available to any local law enforcement agency, thereby fully encouraging use of the shared resource with access to the ad hoc state crash repository.
4. Pilot communities have been selected for e-citation, reflective of urban, suburban, and rural police agencies.
5. All equipment and services has been acquired using competitive procurements through GSA and/or cooperative procurement approved methods. Once the source had been identified for the ruggedized printers, they were tested by the application developers hired by the Judicial Department.

Activities:

Ruggedized mobile printers have been acquired for selected police traffic and patrol vehicles. The contract software product developed in the fourth year would be connected to the mobile data systems and fully interconnected with the Judicial Department.

Project Milestones:

Tasks/Milestones	Projected Completion Date
Submit HS-1 grant application to DOT, Highway Safety Office.	9-01-2012
Select recipient law enforcement agencies in advance and collect baseline citation data for the months of July and August. This data would enumerate both crash related and non-crash related enforcement actions using the existing manual systems.	9-15-2012
Finalize HS1 agreement with the State of Connecticut Highway Safety Office.	10-15-2012
Meet with pilot towns/agencies and determine the number of officers/vehicles in each town to be equipped with the e-citation pilot system.	11-15-2012
Purchase and provide pilot towns with printers, and e-citation software.	12-15-2012
Install applications in vehicles, including printers, and software.	1-15-2013
Provide training in use of e-citation data capture software, and printers.	1-30-2013
Test applications in preparation for pilot towns going live with their e-citation pilots.	2-15-2013
Initiate the pilot and begin to upload collected citation data to the law enforcement server.	3-01-2013
Upload citation data from the law enforcement server to the Centralized Infractions Bureau.	3-15-2013
Continue to provide necessary training and support.	3-30-2013
Employ a survey instrument for users of the e-citation pilot system: <ul style="list-style-type: none"> • To assess the satisfaction level of the users participating in the pilot; • To assess their impressions of productivity improvements; • To assess citizen satisfaction with the system. 	7-30-2013

Projected Budget by Funding Source:

Funding Source	2007	2008	2009	2010	2011	2012
NHTSA 408			300,000	50,000	50,000	50,000
Local Funds			75,000	12,500	12,500	12,500
Total Funds			375,000	62,500	62,500	62,500

Project Status:

As stated in the 6th year project status, this project continues the roll out of e-citation systems in local law enforcement agencies. For Capitol Region law enforcement agencies the software has already been procured and the system only requires the installation of printers in the police vehicles. After law enforcement in the participating towns is provided the requisite equipment and software, training is then completed.

Current progress includes:

- Continuing to issue printers, software, training materials, and user manuals to police departments; joining New Britain were Enfield, Glastonbury, Orange and East Hartford; towns to be rolled out include Bloomfield, Manchester, Newington, Rocky Hill, Wethersfield, East Hampton and East Windsor
- Participating agencies have the ability to immediately reference motor vehicle statutes; operator license information; integrate DMV operator and registration information into the citation; and print a citation for the violator, and forward an electronic copy to Judicial for processing
- e-Citation speeds the citation-writing process, reduces errors in both citation writing and record-keeping steps, and increases the completeness of collected data
- When the collection of crash data is integrated into the mobile application, timeliness, accuracy and completeness will extend to that procedure as well; towns will have access to the data and be able to make informed decisions about spending funds for safety improvements
- Collected citation data uploaded to the centrally located CRCOG server; citation electronically transmitted along with paper copy to CIB
- Continued review of e-citation data edits/validation checks from Judicial
- Emphasizing importance of meeting with Judicial and other project contributors in demonstrating the e-Citation mobile application together with the e-Citation system link
- Coordination with pilot towns to help expedite e-citation pilot start-up

In addition, an extension of the citation application is being made available to non-CAPTAIN mobile data users via an electronic interface. This will allow the software to be used by more communities without requiring additional custom applications.

Project Summaries / 8th Year (2013 – 2014)

Considerable emphasis for traffic records system improvements continues to focus on mobile reporting of traffic citation and motor vehicle crash data by law enforcement in the field; and the need to push these initiatives to full statewide implementation. Outlined in a recent Business Plan for Law Enforcement Data Systems, safety data improvements for E-Crash and E-Citation are closely tied together.

Projects proposed by the TRCC for the 8th year Section 405 application include:

- Electronic Crash Reporting Using National Standards (E-Crash)
- E-Crash / 100% Submission / Assessment and Support
- E-Citation Processing System / 100% Submission / Assessment and Support
- E-Citation Pilots - State Law Enforcement (DPS)
- E-Citation Pilots - Local Law Enforcement (CRCOG)
- E-Citation Pilots - Local Law Enforcement (DPS Application)

Electronic Crash Reporting Using National Standards (E-Crash)

Project ID: CT-P-00015

Core System:

- Crash

Performance Area:

- Completeness
- Uniformity
- Accuracy
- Timeliness

Project Title: Electronic Crash Reporting Using National Standards (E-Crash)

Lead Agency: Capitol Region Council of Governments

Partner Agencies:

- State Department of Transportation
- State and Local Law Enforcement
- Connecticut Police Chief's Association (CPCA)
- University of Connecticut (UConn)
- Criminal Justice Information System (CJIS)
- Traffic Records Coordinating Committee (TRCC)

Project Director/Primary Contact:

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Title: Director of Public Safety
Agency: CRCOG
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Project Description/Basis:

The E-Crash initiative/pilot project provides the launching point for the move towards 100% electronic submission of E-Crash data in the State of Connecticut. The application, a part of the CT: CHIEF records management system (RMS) is being developed/tested by the Capitol Region Council of Governments (CRCOG). That system which is browser based will be offered to communities without license fees. No local servers will be required. The application will provide an optional stand-alone Crash module for law enforcement agencies (LEA) to incorporate as a "front end" to their existing RMS systems. CRCOG would provide the stand-alone module to ConnDOT to distribute to the LEAs.

The Department of Transportation (ConnDOT) in conjunction with CRCOG and the Criminal Justice Information Systems (CJIS) Board of the Office of Policy and Management developed a Project Charter for hosting E-Crash and E-Citation as initial applications of the CT: CHIEF records management initiative.

The decision to host under the CJIS initiative, CISS (Connecticut Information Sharing System), represents a critical and progressive step in developing a statewide system that meets national Model Minimum Uniform Crash Criteria (MMUCC) guidelines and expands highway safety information to a broader spectrum of users. The application will provide a crash report for those involved, a motorist information exchange, and an e-mail notification of the information exchange. The proposed deadline for a new MMUCC compliant crash reporting system is January 2015.

Training for end users will be provided on a train the trainer basis and led by Sergeant Robert Martin of the New Britain Police Department. Sgt. Martin is a certified instructor and is a member of NHTSA's MMUCC committee.

This project satisfies ConnDOT's need for an updated crash data collection tool that meets national standards as well as an accelerated means of reporting from local agencies. By linking technology from other resources (COLLECT, CAPTAIN, DMV, Digital maps) it is expected that the added time to collect additional data at higher quality levels will be offset by the ability to import large amounts of crash detail (operator names, vehicles, street names and intersections, event dates and times) rapidly and with modest user intervention. Importantly, the application attempts to conserve valuable police time by only posing questions specifically related to the type of crash under investigation.

The system presumes that local agencies already have a reasonably up to date personal computer and wireless service for each vehicle and a laser printer in their police stations for printing reports.

There are some savings to the State of Connecticut as well. These include a reduction in the cost of printing paper forms, the entry of data from those reports, and management of an extensive paper records process. The avoidance of these costs can easily fund extensions of the pilot to other regions and support a statewide e-crash effort.

Background:

The existing Connecticut crash reporting system is based on a design formed from paper records. At its base is the accident report, form PR-1. This form has been largely unchanged in the past thirty years. The system flow has been the creation of the paper form by the police accident investigator, printing or copying the actual document followed by mailing the report document to the Department of Transportation for coding and data entry. This legacy system has extensive mainframe based edits that are difficult to enforce in a manual environment and efforts to automate these edits have met with varied levels of success. There is even some anecdotal information that local and state police agencies are frequently compelled to disable the edit facilities in favor of being able to simply complete the document in a timely fashion. The current PR-1 form does not meet the latest national MMUCC guideline for crash data collection. MMUCC, which has gained substantial credence across state highway safety organizations, has been accepted by the National Information Exchange Model (NIEM) program as a national standard. Beginning in 2015, the State will transition to a completely updated electronic crash reporting system using the MMUCC Guideline as the basis for its crash data collection.

Only one Connecticut reporting vendor has developed an automated interface to directly update the records of the Department of Transportation. While this vendor has a large market share; there are substantial costs associated with trying to implement such a system from a statewide perspective.

Accordingly, a browser based system that does not have significant licensing fees is an attractive alternative. This would relieve local police agencies of the need to have extensive and expensive server based facilities and staff to operate a stand-alone records management system. Instead, there is a growing emphasis of resource and service sharing at the local level. Law Enforcement agencies will be able to share a single system with access available by browser rather than by either thick or thin client software. It is in this environment that this proposal recommends a comprehensive crash reporting

capability with linkages to electronic citation, DMV records, digital maps, a proven crash diagramming tool, and a nationally certified crash location product.

Project Goals:

- Develop a functional application for law enforcement, which can be used to meet ConnDOT standards for a new MMUCC compliant crash reporting system by January 2015;
- Achieve technology standardization and data uniformity through a common set of business & technology requirements;
- Lower technology costs by creating economies of scale and bundled purchase agreements; and
- Increase access to data for the local law enforcement and public safety communities.

Objectives:

- To develop a means of timely crash reporting that follows national standards and guidelines;
- To create an easy to use data collection mechanism that conserves valuable police time while collecting additional mission critical and research critical crash data;
- To integrate the E-Crash facility with the existing E-Citation system so as to enable a spatial relationship between crash locations and enforcement activities;
- To improve the accuracy of crash locations to within a 25 foot radius using coordinate technologies enabled through digital maps and advanced browser technologies;
- To provide management information to traffic safety principals and law enforcement executives on a timely basis; and
- To provide a proof of concept pilot program for the use of browser-based, paperless reporting using smart navigation and data collection systems across a diverse set of law enforcement users and geographies.

As stated, the CT: CHIEF RMS is offered to law enforcement agencies without license fees. The only costs to local agencies will be a share of the annual maintenance fees and a small contribution to the enhancement fund. In addition, there is a cost associated with the crash diagramming tool and the incident locator tool. The ILT can be licensed once by the State of Connecticut for all law enforcement agencies at a recurring cost of \$17,000 annually. The diagramming tool in browser format has a unit cost of less than one hundred dollars with annual maintenance of 18%.

Projected Budget by Funding Source:

Funding Source	2007	2008	2009	2010	2011	2012	2013
NHTSA 408						75,000	
NHTSA 405							150,000
Local Funds						18,750	37,500
Total Funds						93,750	187,500

As stated in the 7th year project status, this project is the jump start for rolling out of E-crash systems in law enforcement agencies statewide.

Project Milestones:

Submit HS-1 grant application to ConnDOT, Highway Safety Office;

Finalize HS1 agreement with the State of Connecticut Highway Safety Office;

Work with ConnDOT, TRCC, and CPCA in the review of candidate agencies for assistance/ technical support to adopt the selected form of E-Crash chosen by the applicant agency;

Meet with pilot towns/agencies and determine the specifics of the selected form of E-Crash to be implemented and the number of officers/vehicles to be trained/equipped on E-Crash;

Provide training in use of E-crash data capture software, and printers;

Upload E-Crash data to the CISS server; which is then transferred to the Crash Data Repository (CDR) at the University of Connecticut (UConn);

Continue to provide programming and technical support for the maintenance as well as the enhanced functionality of E-Crash;

Extend E-Crash to include Fatal Analysis Reporting System (FARS) data capture;

Integrate the following into E-Crash:

- High quality digital statewide map provided by the Connecticut Department of Transportation,
- Use of the browser-based Incident Locator Tool (ILT) developed by Iowa State University to graphically define precise coordinates, and
- Inclusion of the browser based EZ Street Draw crash illustration facility

Integrate the following into E-Crash:

- Current E-Citation project for the purposes of developing crash enforcement management information including thematic maps and selective dashboards for manager, supervisors and end users

Current progress includes:

- Demonstrations of E-Crash provided for User group in November 2012, TRCC in December 2012, and CJIS in January 2013
- Demonstrations:
 - E-Crash is an electronic crash reporting application for collecting and processing traffic accident reports within Connecticut
 - CT:CHIEF is a browser-based RMS that organizes, stores, and transmits secure law enforcement and public safety information
 - CJIS Hosting refers to the work activities necessary to plan, install, and maintain E-Crash and CT:CHIEF applications
- Current baseline uses Bing maps for Crash locations and Easy Street for diagrams
- User Test and Pilot environments readiness
- Fine tuning for Survey/Reference data setup

- Participating agencies will have the ability to immediately reference motor vehicle statutes; operator license information; integrate DMV operator and registration information into the crash; and forward an electronic copy to CDR at UConn for processing
- E-Crash will speed the crash-recording process, reduce errors in both recording crash data and record-keeping steps, and increase the completeness of collected data
- When the collection of crash data is integrated into the mobile application, timeliness, accuracy and completeness will extend to that procedure as well; towns will have access to the data and be able to make informed decisions about spending funds for safety improvements
- Collected crash data uploaded to the centrally located CRCOG server; crash electronically transmitted to CDR at UConn

In addition, an extension of the crash application will be made available to non-CAPTAIN mobile data users via an electronic interface. This will allow the software to be used by more communities without requiring additional custom applications.

E-Crash / 100% Submission / Assessment and Support**Project ID:** CT-P-00016**Core System:**

- Crash
- Citation

Performance Area:

- Completeness
- Accuracy
- Timeliness

Project Title: E-Crash / 100% Submission / Assessment and Support**Lead Agency:** Connecticut Police Chief's Association (CPCA)**Partner Agencies/Association:**

- Connecticut Department of Transportation
- State and Local Law Enforcement
- State Judicial Department
- Traffic Records Coordinating Committee (TRCC)

Project Director/Primary Contact:

Name: Richard Mulhall
Title: Chief
Agency: Newington Police Dept
Phone: 860-594-6201
Email: RMulhall@newingtonct.gov

Project Description/Basis:

This project encompasses multiple projects each aimed at serving a segment of the law enforcement community in Connecticut. The Connecticut State Police (CSP) uses a major software vendor (NexGen) for crash and other reporting from the field. There are currently eleven law enforcement agencies participating in the Capital Region Council of Governments (CRCOG) E-Crash project to develop field data collection. Other agencies throughout the state have their own systems. One option is that the CRCOG solution could be offered statewide to local law enforcement, with the CSP continuing to use their own software (or also adopting the CRCOG solution). The need for planning and coordination among law enforcement agencies is critical to the success of this effort. Beginning in January 2015, the State will transition to a completely updated electronic crash reporting system using the MMUCC Guideline, 4th Edition as the basis for its crash data collection.

The 100% electronic data collection and transmission initiative will be closely linked to the E-Crash pilot. The system will be interfaced with the ConnDOT/UConn Crash Data Repository (CDR). The use of E-Crash will reduce data input errors and improve the completeness of the collected data. It should also improve police officer efficiency by reducing the amount of time that officers spend collecting crash data and decrease the time it takes this data to be received by the appropriate State agency.

Background:

It is assumed that there are two distinct efforts aimed at electronic submission of crash report data. The first is through UConn and deals with the existing crash report form. The second is a transition utilizing the CRCOG developed E-Crash approach. This project focuses on attaining 100% crash reporting after the completion of the E-Crash pilot. The proposed deadline for a new MMUCC compliant crash reporting system is January 2015. It will involve a transition from current forms and processes to the new focus on electronic crash reporting for all law enforcement agencies in the State.

Tasks/Milestones:

1. Submit HS-1 grant application to ConnDOT, Highway Safety Office
 2. Assess law enforcement agencies' capabilities, current vendors, ability to adopt E-Crash
 3. Identify early adopters beyond the State Police and CRCOG to implement E-Crash
 4. Identify early adopters' needs for programming, equipment and other assistance
 5. Research/develop funding proposals to support early adopters as needed
 6. Coordinate rollout for early adopters, CRCOG agencies and the State Police
-
7. Identify mid-term adopters among law enforcement agencies and vendors to implement E-Crash
 8. Identify mid-term adopters' needs for programming and other assistance
 9. Research/develop funding proposals to support mid-term adopters as needed
 10. Roll-out to mid-term adopters
 11. Identify late adopters and potential non-adopter law enforcement agencies
 12. Develop additional and alternative methods to support E-Crash solutions for late- and non-adopters
 13. Research/develop budget and timeline for aiding late- and non-adopter support for E-Crash solutions
 14. Implement alternative solutions for the remaining law enforcement agencies

Projected Budget by Funding Source:

Funding Source	2007	2008	2009	2010	2011	2012	2013
NHTSA 405							300,000
Local Funds							75,000
Total Funds							375,000

Project Status:

The need for planning and coordination with the 100% submission / assessment and support initiative for E-Citations will also be critical as efforts to assess law enforcement agencies' capabilities, their current vendors, and their ability to adopt to E-Citations as well as E-Crash will be interrelated. The following results are from a 2012 survey of local law enforcement agencies (85 towns responded) and the State Police.

Law Enforcement Survey for E-Crash and E-Citation

Results from 85 towns and the State Police, discussed during the March 2012 TRCC meeting.

Police Dept	Do you submit the PR-1 electronically now?	If not, do you have the capability to do so?	Do you participate in electronic citation?	If not, do you have the capability to do so?	Obstacles to adopting E-Crash and/or E-Citation
85 Towns	7 - Yes	32 - Yes	17 - Yes	20 - Yes	30 - RMS 22 - Funds
State Police	Yes		Yes		

Differences by law enforcement in the interpretation of "submitting a PR-1 electronically"E-mailing in PDF forms?

Completing an electronic PR-1 at the scene; printing and mailing a paper copy to ConnDOT?

Completing a form-based PR-1, where the form is on your laptop?

Completing a paper PR-1, then entering it on your laptop back at the station?

E-Citation Processing System / 100% Submission / Assessment and Support**Project ID:** CT-P-00009**Core System:**

- Citation/Adjudication
- Crash

Performance Area:

- Completeness
- Uniformity
- Timeliness

Project Title: E-Citation Processing System / 100% Statewide Submission / Assessment and Support**Lead Agency:** State of Connecticut Judicial Branch – Court Operations, Centralized Infractions Bureau**Partner Agencies:**

- Connecticut Police Chief's Association (CPCA)
- State and Local Law Enforcement Agencies
- Connecticut Department of Transportation
- Traffic Records Coordinating Committee (TRCC)
-

Project Director/Primary Contact:

Name: Stacey B. Manware
Title: Deputy Director, Centralized Infractions Bureau
Agency: State of Connecticut Judicial Branch
Office: Centralized Infractions Bureau
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Project Description:

The citation system in Connecticut was a manual system, vulnerable to human error. Information from handwritten tickets was data entered and subsequently transmitted to various entities. Exception processing was time consuming. An electronic method of creating tickets and populating the CIB database is leading to improved processing times and accuracy of the information processed.

This project is dedicated to the continued development of an application that enables the receipt by the Centralized Infractions Bureau (CIB) of electronically captured citation data, automatically populated into the CIB system, leading to a paperless court in Connecticut for processing infractions. The project serves as a complement to all law enforcement citation pilot efforts statewide through ultimately building a back-end process for electronic traffic citations.

- Background - CIB; Unified Court System; 250 LE Agencies; 425,000 Tickets per Year; Lock Box Payment

- Project Focus - Timeliness; Accuracy; Technical Agility to Respond to Public Policy Changes; Better Performance Measures
- Manual Limitations - Ticket Inventory; Road Conditions; Legislative Change; Legibility; Arithmetic Errors
- Timeframe - Analysis for Ticket Returns
- Ticket Errors - Wrong Amount Due; Wrong Infraction Number; Wrong Amt for Infraction
- Successes - Collaboration; Proof of Concept Widely Accepted; First Utilization of e-Signature; Impetus for e-Pay/Plead
- Challenges - Broaden User Base; Demand for Multi-Uses for Mobile Printer; Crash Info Exchange, Summons, Parking Tickets, Warnings

Goal:

Create an application that enables the Judicial Branch's Centralized Infractions Bureau (CIB) to electronically receive traffic citation information from law enforcement agencies, automatically store information in the CIB citation database, and electronically process citations.

Objective: Enable the e-citation application to accommodate Commercial Citations.

Objective: Enable the e-citation application to allow electronic viewing and disposition of citations in court locations.

Objective: Enable the e-citation application to provide a "paperless courtroom" with dedicated dockets for citations and enhanced opportunities for electronic "self-pay" options.

Purpose:

- Streamline citation system process through applied technology
- Increase revenue
- Increase uniformity of infractions processing
- Utilize staff more efficiently
- Assist law enforcement initiatives

Tasks/Milestones:

1. Submit/finalize HS-1 grant application to ConnDOT, Highway Safety Office;
2. Production of electronic-citation data submitted by law enforcement resulting in automatic population into CIB database;
3. Document volumes and define hardware/software needs;
4. Architecture design;
5. Web services application;
6. Streamlining of CIB workflow; and

7. Longer term enhancements may include absorbing additional jurisdictions and/or the creation of more e-Infractions courts.

Additional Tasks/Milestones Coordinating Assessment/Support Efforts with CPCA:

8. Coordinate with CPCA in their assessment of law enforcement agencies' capabilities, current vendors, ability to adopt E-Citation
9. Identify candidate law enforcement agencies beyond the State Police and CRCOG to implement E-Citation
10. Identify candidate agencies' needs for programming and other assistance
11. Research/develop funding proposals to support candidate agencies as needed
12. Roll-out to candidate agencies

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13. Identify additional candidate law enforcement agencies to implement E-Citation
 14. Identify agencies' needs for programming and other assistance
 15. Research/develop funding proposals to support agencies as needed
 16. Roll-out to additional candidates
 17. Identify late adopters and/or potential non-adopter law enforcement agencies
 18. Develop additional and alternative methods to support E-Citation solutions for late- and non-adopters
 19. Research/develop budget and timeline for aiding late- and non-adopter support for E-Citation solutions
 20. Implement alternative solutions for the remaining law enforcement agencies

Application:

Overview - Software; In-Car Equipment; Data Communications Network; Citation Forms/Zebra Printer

Rollout - # Printers; LE Agencies; Thermal Paper; Train-the-Trainer; Feedback from Pilot

Mgmt Reports; Monthly by Officer; by Violation Type; by Location; Separate Data Set – Map Based Analysis

Preparation for Each Agency; Equipment/Software in Vehicle; Regis ORI with e-Citation; Test System; Train Officers

CRCOG Users/e-Citation; Windows Style e-Citation Interface; Main Menu Functions

New Citation; Citation Search; Print; User Preferences; Clear Search Queues

Process; Demographics; License/Vehicle; Specifics; Infractions/Fines; Notes; Preview; Sign-Save-Print

Successes; User Accepts; App Sharing Across Jurisdictions; Potential for Other Mobile Ticket Apps

Challenges; Budget Limits Broader Rollout; Towns Slow to Rollout "Seed" Units; Long Term Issue of Replacement Costs; Revenue Sharing to Cover Costs - Strong Potential

Projected Budget by Funding Source:

Funding Source	2007	2008	2009	2010	2011	2012	2013
NHTSA 408	75,000	75,000	75,000	150,000	100,000	75,000	
NHTSA 405							150,000

Match	19,000	19,000	19,000	37,500	25,000	19,000	37,500
Total Funds	94,000	94,000	94,000	187,500	125,000	94,000	187,500

Status:

The Electronic Citation Processing System is creating efficiencies in several areas. The receipt of electronically captured citation data by the CIB, is leading to the data being automatically populated into the CIB automated system.

In Phase One, officer handwriting is being replaced by type-written characters, therefore eliminating entry errors. Fewer entry errors are resulting in less exception processing, which improve the timeliness of downstream processing transmissions to the Courts and the Department of Motor Vehicles.

Phase Two, including activities allowing for direct population of the CIB database, further minimizes data entry, key stroke errors, and exception processing.

Phase Three will allow for the expansion of e-Citation processing, further developing the application to accommodate Commercial Citations, and the electronic viewing and disposition of citations in court locations. This phase will also begin the development of an e-Citation paperless courtroom with dedicated dockets for citations and will enhance the availability of electronic, self-pay opportunities.

Progress:

Activities have been completed and coordinated in conjunction with the Department of Public Safety, CRCOG and CIDRIS initiatives.

As highlighted, in regards to recent pilot-testing involving State and Local law enforcement, progress includes:

- Prototype for e-Citation back-end process/system has been developed
- System being developed as a real-time/web-based application
- CIB still debugging production problems as they occur from the State Police
- CIB beginning development on streamlining the citation workflow. This involves taking the e-Citations received and automatically uploading them into the legacy system
- Currently, CIB is receiving the citations electronically and printing and scanning them, then performing data entry from the now-typed citations
- Continuing to meet with various stakeholders to review adjusted timeline(s), expectations and responsibilities
- e-Pay component, a web-based automated system to electronically accept credit card payments for infractions and certain payable violations, now operational – is targeted for June to be able to allow violators to pay multiple tickets, rather than requiring individual transactions per ticket

Performance Measures

- Total tickets issued: 425,000
- Total tickets issued electronically: 45,000
- Total tickets entered electronically: 2,100
- Pre-Program: Average number of days from issuance to receipt – 28 days
- Pre-Program: Error rate – 11%
- Phase I: Average number of days from issuance to receipt – 4 days

- Phase I: Error rate – 5%
- Phase II: Average number of days from issuance to receipt – 4 days
- Phase II: Error rate – 1.5%
- Phase III: Average number of days from receipt to data entry – 7 per 1,000 tickets (anticipated)
- Phase III: Average number of minutes from receipt to data entry – 120 per 1,000 tickets “

Interim Progress Report

Based on an Interim Progress Report, submitted to NHTSA - January 2013 for Section 405 application -

Connecticut's March 2013 **Determination of Measurable Progress by Connecticut** was based on:

The timeliness of the Citation/Adjudication database improved, as evidenced by the decrease, from 19.03 days during July-September 2012, to 15.61 days during October-December 2012, in the average number of days from citation issuance by the Connecticut State Police to entry of the citation record into the Centralized Infractions Bureau database. Because this improvement occurred within the 12 months immediately preceding the FY 2013 due date for applications for State Traffic Safety Information System Improvements Grants in FY 2013, it was determined to be a demonstration of current progress.

E-Citation Project - State Law Enforcement (DPS)**Project ID:** CT-P-00010**Core System:**

- Citation/Adjudication

Performance Area:

- Completeness
- Accuracy
- Timeliness

Project Title: E-Citation Project - State Law Enforcement (DPS)**Lead Agency:** Department of Public Safety / Division of State Police**Partner Agencies:**

- State Judicial Department
- State Department of Transportation
- Traffic Records Coordinating Committee (TRCC)

Project Director/Primary Contact:

Name: Mark Panaccione
Title: Captain
Agency: Department of Public Safety
Phone: 860-685-8686
Email: Mark.Panaccione@ct.gov

Project Description:

This project will continue to enhance the deployment of e-Citation systems for the Connecticut State Police. Mobile data capture software has already been developed for the existing e-Citation effort. Printers, and other required software and/or peripheral devices will be installed in State Police vehicles.

The requested grant funds will be used to purchase at least one hundred (100) mobile printers and other peripheral devices for Connecticut State Police vehicles. Once vehicles are equipped with the required hardware, and related software/peripherals, State Police personnel will use their e-Citation application to electronically upload collected citation data to the State Police server and then to the State of Connecticut's Judicial Department, Centralized Infractions Bureau (CIB).

Basis for Project:

Automated citation data collection is only available in a few law enforcement jurisdictions. Collection and submission of citation data in the paper (manual) format is largely an inefficient process.

Additionally, the use of the e-Citation software will reduce data input errors and improve the completeness of the collected data. In the pilot phase, it has also proven to increase police officer efficiency by reducing the amount of time that officers spend collecting citation data and decrease the time it takes this data to be received by the courts. The law enforcement server interface provides a

direct link for law enforcement officers to query driver licensing and vehicle data as well as provide a secondary linkage to emergency responders (i.e., EMS, fire, etc.).

Expected Impact:

Expected impacts include:

- Expand management information and targeted enforcement activities
- Improved timeliness of the availability of citation data to the courts
- Improved accuracy and completeness of collected and submitted citation data

Project Milestones:

Tasks/Milestones	Projected Completion Date	Actual Completion Date
Submit/Finalize HS-1 grant application to DOT, Highway Safety Office.	10/01/13	
Determine the number of officers/vehicles to be equipped with the e-Citation pilot system.	10/15/13	
Purchase/provide officers with necessary hardware/software applications.	11/01/13	
Install applications in vehicles, including printers and software.	2/15/14	
Provide training in use of e-Citation data capture software, printers.	2/01/14	
Conduct tests to monitor e-Citation applications with increased users / volume.	4/30/14	
Upload collected citation data to the State Police server.	4/30/14	
Upload citation data from the law enforcement server to the Centralized Infractions Bureau.	4/30/14	
Continue to provide necessary training and support.	2/15/14	

Projected Budget by Funding Source:

Funding Source	2007	2008	2009	2010	2011	2012	2013
NHTSA 408		25,000		50,000		100,000	
NHTSA 405							100,000
Local Funds		6,250		12,500		25,000	25,000
Total Funds		31,250		62,500		125,000	125,000

Status:

This project continues the roll out of e-citation systems for the State Police. A law enforcement server interface provides linkage for law enforcement to query driver licensing and vehicle registration data, populating the e-citation. Once the officer has generated an e-citation, it is electronically sent to the Centralized Infractions Bureau's automated system.

Performance Improvements:

State Police 1200 Troopers; Primary Law Enforcement - all Limited Access Highways

Exclusive Jurisdiction in 61 Largely Rural Towns; Concurrent Jurisdiction in all 169 Towns

Every Troop is assigned a Vehicle with a Mobile Data Computer

Hand Written vs. e-Citations

60% Increase (select Time Period) e-Citations Issued vs. Written

Successes Extraordinarily Efficient (4-7 Minutes per Citation)

Substantial Potential for Revenue Enhancement

Wide Acceptance; Common Approach Sponsored by Judicial

Challenges > 500 Printers Needed

Furnish All Vehicles and Create a Uniform Process

Training - Need to Formalize; Bigger Classes Needed; Budget Issues

E-Citation Project - Local Law Enforcement (CRCOG)**Project ID:** CT-P-00011**Core System:**

- Citation/Adjudication

Performance Area:

- Completeness
- Accuracy
- Timeliness

Project Title: E-Citation Project for Local Law Enforcement**Lead Agency:** Capitol Region Council of Governments**Partner Agencies:**

- State Judicial Department
- State Department of Transportation
- Traffic Records Coordinating Committee (TRCC)

Project Director/Primary Contact:

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Title: Director of Public Safety
Agency: CRCOG
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Email: cassis@crcog.org

Project Description/Basis:

This project will continue the roll out of e-citation and e-crash systems in law enforcement agencies. Software has already been procured for the existing e-citation efforts and printers, and other appropriate hardware/software will be installed in police vehicles.

The requested grant funds will be used to purchase mobile printers, and other appropriate hardware for select law enforcement vehicles. Once vehicles are equipped with the required hardware, law enforcement personnel will use e-citation software developed under previous year Section 408 initiatives. Citation data will be electronically uploaded to the appropriate law enforcement servers. These servers will then upload the citation data electronically to the appropriate State of Connecticut agency servers via XML specification standards.

The use of the e-citation software will reduce data input errors and improve the completeness of the collected data. It should also improve police officer efficiency by reducing the amount of time that officers spend collecting citation data and decrease the time it takes this data to be received by the appropriate State agency.

Background:

Police efficiency is substantially hampered by the inability to cite violators associated with crashes and selective enforcement in an automated fashion. Moreover, this presents a systemic challenge to the enforcement system in that it compels substantial and delayed ticket entry and disposition by the state's judicial system. While improvements can be incremental, an electronic citation system is best accomplished as a cradle to grave ticketing system involving all parties from the outset.

In conjunction with the leadership of the Traffic Records Coordinating Committee, the State of Connecticut Judicial Department initiated a pilot electronic citation program. This program has the support of the Department of Public Safety and the Department of Transportation along with local law enforcement. In the past year, the Judicial Department has resolved issues regarding an electronic citation format and the paper document upon which the citation will be printed. Moreover, mobile printers and scanners have been identified and tested. While these may seem like small migratory tasks, they are vital steps toward the development of an all-electronic citation system that will provide not only automated ticketing and docketing, but eventually full payment and Department of Motor Vehicles' adjudication of the infractions.

Expected Impact:

Expected impacts include:

- Expand management information and targeted enforcement activities in equipped municipalities
- Improved timeliness of the availability of citation data to the courts
- Improved accuracy and completeness of collected and submitted citation data

Goals and Objectives:

Technical Objectives:

This project builds on prior investments of the State of Connecticut Department of Transportation.

1. The electronic citation application provides the ability to:
 - Reference the motor vehicle statute files maintained by the Connecticut Judicial Department
 - Swipe or scan operator license information from crash participants or violators
 - Integrate DMV operator and registration information to the citation
 - Print a citation for the violator; forward an electronic citation to the Judicial Department's Central Infractions Bureau; and as an interim step, print a hard copy of the citation
2. Using existing hardware and communications facilities, this system will provide a GPS reference on all electronic crash records and citations.

Tasks/Milestones:

1. Provide "train the trainer" instruction to selected individuals from participating towns, who will in turn train the police officers in their communities in the operation of the equipment and the full e-citation application.
2. Local law enforcement records management system, being initiated, contains the standard for the XML interface for crash reporting. Select towns will send all of their crash reports through the new system by the end of 2013

3. As an adjunct to the e-Citation project, a records management system will be made available to any local law enforcement agency, thereby fully encouraging use of the shared resource with access to the ad hoc state crash repository.
4. Pilot communities will be selected for e-citation that are reflective of urban, suburban, and rural police agencies.
5. All equipment and services will be acquired using competitive procurements through GSA and/or cooperative procurement approved methods. The source has already been identified for the ruggedized printers. These items have been tested by the application developers hired by the Judicial Department.

Activities:

Ruggedized mobile printers would be acquired for selected police traffic and patrol vehicles. The contract software product developed in the fourth year would be connected to the mobile data systems and fully interconnected with the Judicial Department.

Project Milestones:

Tasks/Milestones	Projected Completion Date	Actual Completion Date
Submit HS-1 grant application to DOT, Highway Safety Office.	9-01-2013	
Select recipient law enforcement agencies in advance and collect baseline citation data for the months of July and August. This data would enumerate both crash related and non-crash related enforcement actions using the existing manual systems.	9-15-2013	
Finalize HS1 agreement with the State of Connecticut Highway Safety Office.	10-15-2013	
Meet with pilot towns/agencies and determine the number of officers/vehicles in each town to be equipped with the e-citation pilot system.	11-15-2013	
Purchase and provide pilot towns with printers, and e-citation software.	12-15-2013	
Install applications in vehicles, including printers, and software.	1-15-2014	
Provide training in use of e-citation data capture software, and printers.	1-30-2014	
Test applications in preparation for pilot towns going live with their e-citation pilots.	2-15-2014	
Initiate the pilot and begin to upload collected citation data to the law enforcement server.	3-01-2014	
Upload citation data from the law enforcement server to the Centralized Infractions Bureau.	3-15-2014	
Continue to provide necessary training and support.	3-30-2014	
Employ a survey instrument for users of the e-citation pilot system: <ul style="list-style-type: none"> • To assess the satisfaction level of the users participating in the pilot; • To assess their impressions of productivity improvements; • To assess citizen satisfaction with the system. 	7-30-2014	

Projected Budget by Funding Source:

Funding Source	2007	2008	2009	2010	2011	2012	2013
NHTSA 408			300,000	50,000	50,000	50,000	
NHTSA 405							50,000
Local Funds			75,000	12,500	12,500	12,500	12,500
Total Funds			375,000	62,500	62,500	62,500	62,500

Project Status:

As stated in the 7th year project status, this project continues the roll out of e-citation systems in local law enforcement agencies. For Capitol Region law enforcement agencies the software has already been procured and the system only requires the installation of printers in the police vehicles. After law enforcement in the participating towns is provided the requisite equipment and software, training is then completed.

Current progress includes:

- Continuing to issue printers, software, training materials, and user manuals to police departments; joining New Britain were Enfield, Glastonbury, Orange and East Hartford; towns to be rolled out include Bloomfield, Manchester, Newington, Rocky Hill, Wethersfield, East Hampton, East Windsor, and Redding.
- Participating agencies have the ability to immediately reference motor vehicle statutes; operator license information; integrate DMV operator and registration information into the citation; and print a citation for the violator, and forward an electronic copy to Judicial for processing
- e-Citation speeds the citation-writing process, reduces errors in both citation writing and record-keeping steps, and increases the completeness of collected data
- When the collection of crash data is integrated into the mobile application, timeliness, accuracy and completeness will extend to that procedure as well; towns will have access to the data and be able to make informed decisions about spending funds for safety improvements
- Collected citation data uploaded to the centrally located CRCOG server; citation electronically transmitted along with paper copy to CIB
- Continued review of e-citation data edits/validation checks from Judicial
- Emphasizing importance of meeting with Judicial and other project contributors in demonstrating the e-Citation mobile application together with the e-Citation system link
- Coordination with pilot towns to help expedite e-citation pilot start-up

In addition, an extension of the citation application will be made available to non-CAPTAIN mobile data users via an electronic interface. This will allow the software to be used by more communities without requiring additional custom applications.

E-Citation Project - Local Law Enforcement (DPS Application)

Project ID: CT-P-00010

Core System:

- Citation/Adjudication

Performance Area:

- Completeness
- Accuracy
- Timeliness

Project Title: E-Citation Pilots - Local Law Enforcement (DPS Application)

Lead Agency: Local Law Enforcement Agency (Using same RMS vendor as DPS)

Partner Agencies:

- Local Law Enforcement
- Department of Public Safety
- Connecticut Police Chief's Association (CPCA)
- State Judicial Department
- Connecticut Department of Transportation
- Traffic Records Coordinating Committee

Project Director/Primary Contact:

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Project Description:

This project provides a continuation and expansion on the earlier efforts of the Ansonia Group, which accomplished the introduction of E-Citations for the following towns (Fairfield, Shelton, Woodbridge, and Ansonia); the deployment of e-Citation systems for the law enforcement agencies in other Connecticut towns using the same vendor as DPS (State Police).

Mobile data capture software has already been developed for the existing e-Citation effort. Printers, and other required software and/or peripheral devices will be installed in law enforcement agency vehicles.

The requested grant funds will be used to purchase mobile printers and other peripheral devices for local law enforcement police vehicles. Once vehicles are equipped with the required hardware, and related software/peripherals, law enforcement personnel will use their e-Citation application to electronically upload collected citation data to the State of Connecticut's Judicial Department, Centralized Infractions Bureau (CIB).

Basis for Project:

Automated citation data collection is only available in a few law enforcement jurisdictions. Collection and submission of citation data in the paper (manual) format is largely an inefficient process.

Additionally, the use of the e-Citation software will reduce data input errors and improve the completeness of the collected data. In the pilot phase, it has also proven to increase police officer efficiency by reducing the amount of time that officers spend collecting citation data and decrease the time it takes this data to be received by the courts. The law enforcement server interface provides a direct link for law enforcement officers to query driver licensing and vehicle data as well as provide a secondary linkage to emergency responders (i.e., EMS, fire, etc.).

Expected Impact:

Expected impacts include:

- Expand management information and targeted enforcement activities
- Improved timeliness of the availability of citation data to the courts
- Improved accuracy and completeness of collected and submitted citation data

Project Milestones:

Tasks/Milestones	Projected Completion Date	Actual Completion Date
Submit/Finalize HS-1 grant application to DOT, Highway Safety Office.	10/01/13	
Determine the number of law enforcement agencies' officers/vehicles to be equipped with the e-Citation pilot system.	10/15/13	
Purchase/provide officers with necessary hardware/software applications.	11/01/13	
Install applications in vehicles, including printers and software.	2/15/14	
Provide training in use of e-Citation data capture software, printers.	2/01/14	
Conduct tests to monitor e-Citation applications with increased users / volume.	4/30/14	
Upload collected citation data to the appropriate law enforcement server.	4/30/14	
Upload citation data from the law enforcement server to the Centralized Infractions Bureau.	4/30/14	
Continue to provide necessary training and support.	2/15/14	

Projected Budget by Funding Source:

Funding Source	2007	2008	2009	2010	2011	2012	2013
NHTSA 408		25,000		50,000			
NHTSA 405							50,000
Local Funds		6,250		12,500			12,500

Total Funds		31,250		62,500			62,500

Status:

This project continues the roll out of e-citation systems for local law enforcement agencies, using the same RMS vendor as the State Police. A law enforcement server interface provides linkage for law enforcement to query driver licensing and vehicle registration data, populating the e-citation. Once the officer has generated an e-citation, it is electronically sent to the Centralized Infractions Bureau's automated system.

Performance Improvements:

Hand Written vs. e-Citations

60% Increase (select Time Period) e-Citations Issued vs. Written

Successes Extraordinarily Efficient (4-7 Minutes per Citation)

Substantial Potential for Revenue Enhancement

Wide Acceptance; Common Approach Sponsored by Judicial

Challenges > 100s of Printers Needed

Furnish All Vehicles and Create a Uniform Process

Training - Need to Formalize; Bigger Classes Needed; Budget Issues

Project Summaries / 9th Year (2014 – 2015)

Emphasis for traffic records system improvements continues with a focus on mobile reporting of traffic citation and motor vehicle crash data, in addition to electronic linkage of injury outcome data, tracking person specific crash and injury records from a crash event to emergency medical services, trauma, emergency department, and hospital information management and exchange.

Projects proposed by the TRCC for the 9th year Section 405c application include:

- Electronic Crash Reporting / National Standards
- Electronic Crash / Citation Reporting – Local Law Enforcement

- Electronic Citation / Summons Arrest / Warning Processing
- Electronic Charging / Citation / Warning / Summons Arrest

- EMS/ISS Data System Tracking/Linkage

Electronic Crash / Citation Reporting / Local Law Enforcement

Project ID: CT-P-00016

Core System:

- Crash
- Citation

Performance Area:

- Completeness
- Accuracy
- Timeliness

Project Title: Electronic Crash / Citation Reporting / Local Law Enforcement

Lead Agency: Connecticut Police Chief's Association (CPCA)

Partner Agencies/Association:

- Connecticut Department of Transportation
- State and Local Law Enforcement
- State Judicial Department
- Traffic Records Coordinating Committee (TRCC)

Project Director/Primary Contact:

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Project Description/Basis:

Beginning in January 2015, the State will transition to a completely updated electronic crash reporting system using the MMUCC Guideline, 4th Edition as the basis for its crash data collection. This project encompasses multiple projects aimed at serving a segment of the law enforcement community. The development of a pilot E-Crash application by CRCOG has been completed. Other agencies throughout the state have their own systems. The need for planning and coordination among law enforcement agencies is critical to the success of this effort. In addition to E-Crash, this project will continue the rollout of E-Citation systems in local law enforcement agencies.

The E-Crash initiative will be interfaced with the ConnDOT/UConn Crash Data Repository (CDR). The E-Citation effort will focus on the purchase of mobile printers, and other appropriate hardware for select local law enforcement vehicles. Once vehicles are equipped with the required hardware, law enforcement personnel will use E-Citation software developed under previous year Section 408 initiatives. Citation data will be electronically uploaded to the appropriate law enforcement servers, then to the appropriate State servers via XML specification standards. Electronic crash and citation reporting will reduce data input errors and improve the completeness of the collected data. It should also improve police officer efficiency by reducing the amount of time that officers spend collecting crash and citation data and decrease the time it takes this data to be received by the appropriate State agency.

Background:

The existing crash reporting system is based on the accident report, form PR-1, which has been largely unchanged in the past thirty years. The legacy system has extensive mainframe based edits that are difficult to enforce in a manual environment. The current PR-1 form does not meet the latest national MMUCC Guideline, which helped form the initial call for change during a meeting of the TRCC, three years ago.

The proposed deadline for a new MMUCC compliant crash reporting system, January 2015, will involve a transition from current forms and processes to the new focus on electronic crash reporting for all law enforcement agencies in the State.

Police officer efficiency is substantially hampered by the inability to cite violators associated with crashes and selective enforcement in an automated fashion. This presents a challenge to the enforcement system in the form of delayed ticket entry and disposition by the state's judicial system. While improvement can be incremental, an electronic citation system is best accomplished as a cradle to grave ticketing system involving all of the parties from the outset.

Expected Impact:

- Expand management information and targeted enforcement activities in equipped municipalities;
- Improve timeliness, accuracy, completeness and availability of both crash and citation data; and
- New opportunities for focused policy initiatives that might result in stronger sanctions on recurrent violators and greater attention to locations of frequent crashes and significant injuries.

Activities/Tasks:

1. Submit/finalize HS-1 grant application with ConnDOT, Highway Safety Office;
2. Develop capability for connectivity, enabling parallel flow of crash data to UConn. Diversion of crash data to UConn from the File Transfer Protocol (FTP) site for import into the Crash Data Repository (CDR) at UConn. Building on a model already in place – State Police currently sends electronic files of the PR-1 to UConn and to ConnDOT. Connectivity to be established, allowing UConn to import the data once it is received at the FTP site; giving law enforcement near immediate access to their own data; a strong selling point to motivating agencies to convert to the new reporting system;
3. Purchase of the Incident Locator Tool (ILT), developed by Iowa State University. This locator tool would attract low end PDF towns to come on board with electronic reporting; CT: Chief towns to access the tool on the Newington server; and E-Crash towns whose vendor currently does not offer such a tool. In time, ConnDOT could drop the license fee and ask UConn to provide some level of technical support;
4. Meet with pilot towns/agencies and determine the number of officers/vehicles in each town to be equipped with the E-Citation system. Purchase and provide pilot towns with printers and E-Citation software. Install applications in vehicles;
5. Developing a shared GIS system. Of strategic importance is the availability of a shared geographic information system (GIS) for crime and traffic safety data collection. Integrating E-Crash with E-Citation will enable a spatial relationship between crash locations and enforcement activities. Recently, the DPS revealed in a TRCC meeting, their use of a geographic base, applied in a statewide DDACTS (Data Driven Approach to Crime and Traffic Safety) initiative. Ultimately, the TRCC would like to see a mapset formed from federated GIS systems, and maintained and operated as a service by ConnDOT.

6. Create high quality crash location capabilities. The State is currently tied into this initiative, through the ongoing GIS development by ConnDOT, the browser based E-Crash solution and ILT, discussed earlier, and the inclusion of the EZ Street Draw crash illustration facility, which the State has also adopted;
7. Provide “train the trainer” instruction for E-Crash and E-Citation. Link content from the E-Crash and E-Citation initiatives, together with video and other training documentation, to facilitate training for crash and citation reporting;
8. Begin laying the groundwork for incorporating data collection for the Fatality Analysis Reporting System (FARS) within E-Crash. At 0.25 percent of total reported motor vehicle crashes in 2012, the inclusion of electronic fatal crash reporting in the new MMUCC system is expected; however, it could require a mandate by ConnDOT;
9. Continue assessment of law enforcement capabilities to meet state needs for electronic crash reporting, ability to adopt E-Crash, hardware/software needs, funding needed, etc;
10. Upload citation data to the Centralized Infractions Bureau;
11. Identify needs for programming, equipment and other assistance;
12. Research/develop funding proposals to continue support for late term adopters as needed; and
13. Continue support with the coordination of the rollout of E-Crash and E-Citation.

Projected Budget by Funding Source:

Funding Source	2009	2010	2011	2012	2013	2014	2015
NHTSA 405c							400,000
Local Funds							100,000
Total Funds							500,000

Project Status:

The need for planning and coordination with the 100% submission / assessment and support initiative for E-Citations is also critical as efforts to assess law enforcement agencies' capabilities, and their ability to adopt to E-Citations as well as E-Crash will be interrelated.

Current outreach efforts include:

- Law enforcement agency technology capabilities surveys;
- Meetings with both State and Local law enforcement agencies;
- Meetings with the Connecticut Police Chief's Association (CPCA);
- Formation of law enforcement user groups and outreach teams to assist outreach efforts;
- Distribution of outreach message(s) and efforts via e-mails, newsletters and brochures; and
- Scheduling of webinars, demonstrations, and meeting attendance to promote different options for law enforcement agencies to consider for electronic crash and citation reporting.

Electronic Citation / Summons Arrest / Warning Processing

Project ID: CT-P-00009

Core System:

- Citation/Adjudication
- Crash

Performance Area:

- Completeness
- Uniformity
- Timeliness

Project Title: Electronic Citation / Summons Arrest / Warning Processing

Lead Agency: State of Connecticut Judicial Branch – Court Operations, Centralized Infractions Bureau

Partner Agencies:

- Connecticut Police Chief's Association (CPCA)
- State and Local Law Enforcement Agencies
- Connecticut Department of Transportation
- Traffic Records Coordinating Committee (TRCC)
- Central Connecticut State University (CCSU)

Project Director/Primary Contact:

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Project Description:

Prior to the implementation of Electronic Citation (E-Citation) Processing, Connecticut's traffic violation citation system was completely manual; vulnerable to human error at many points in the process. Handwritten documents required multiple entry in numerous and varied systems causing inconsistencies and inaccuracies in data. This sometimes led to agencies that relied on the system, such as the Department of Motor Vehicles (DMV), receiving erroneous information, which in some cases resulted in a failure to consistently and accurately apply conviction information to driver history files. In addition to creating opportunities for inaccurate and conflicting data to be entered into the system, reliance upon handwritten citations and multiple points of data entry often resulted in processing delays and time consuming exceptions processing.

A statewide systematic effort was undertaken to address these problems, with the Judicial Branch E-Citation Processing System project developed in coordination with Citation projects involving the Capitol Region Council of Government (CRCOG) and the Department of Public Safety (DPS). This resulted in

the development of a statewide electronic roadside data capture system for the issuing and reporting of traffic citations.

The E-Citation / Summons / Warning project is dedicated to the continued development of an application that enables the receipt / availability of citation, summons and warning data for the courts. The project serves as a complement to all law enforcement e-Charging pilot efforts statewide through ultimately building a back-end process for electronic traffic citations, summons notices, and warning tickets.

- Background - CIB; Unified Court System; 250 LE Agencies; 425,000 Tickets per Year; Lock Box Payment,
- Project Focus - Improved Timeliness; Accuracy; Technical Agility to Respond to Public Policy Changes; Better Performance Measures,
- Manual Limitations - Ticket Inventory; Road Conditions; Legislative Change; Legibility; Arithmetic Errors,
- Timeframe - Analysis for Ticket Returns,
- Ticket Errors - Wrong Amount Due; Wrong Infraction Number; Wrong Amount for Infraction,
- Successes - Collaboration; Proof of Concept Widely Accepted; First Utilization of e-Signature Impetus for e-Pay/Plead, and
- Challenges - Broaden User Base; Demand for Multi-Uses for Mobile Printer; Crash Info Exchange, Parking Tickets.

Goal:

Create an application that enables the Judicial Branch to electronically receive traffic citation, summons notices, and warning data from law enforcement agencies; automatically store, process and supply required information to the courts.

Objective: Design and implement an on-demand, centralized, web-based records management system (RMS) for law enforcement agencies to do the following:

- Query agency-specific data related to the issuance of citations, summons notices and warning tickets,
- Generate various reports related to agency activity in conjunction with the issuance of citations, etc., (e.g., by street, officer, charge and defendant),
- Provide for the management of data, such as approval process for citations, etc., prior to submission to CIB,
- Allow for cross-agency searching on citations, summons notices, and warnings,
- Allow agencies to export data in a variety of formats for use in spreadsheets and/or other applications, and
- Provide a web-service interface for querying of data by other applications.

Objective: Continue efforts to enable the e-citation / summons arrest / warning processing application to allow electronic viewing and disposition of required data in court locations.

Objective: Continue efforts to enable the e-citation / summons / warning application to provide a "paperless courtroom."

Purpose:

- Streamline citation / summons arrest / warning processing system process through applied technology,
- Increase revenue,
- Increase uniformity of event processing,
- Utilize staff more efficiently, and
- Assist law enforcement initiatives.

Tasks/Milestones:

1. Submit/finalize HS-1 grant application to ConnDOT, Highway Safety Office,
2. Production of electronic-citation / summons arrest / warning ticket data submitted by law enforcement resulting in automatic population into Judicial database,
3. Document volumes and define hardware/software needs,
4. Web services application,
5. Continued streamlining of CIB workflow,
6. Creation of more e-Infractions courts,
8. Continue coordination with CPCA in their assessment of law enforcement agencies' capabilities, current vendors, ability to adopt electronic citation / summons / warning ticket,
9. Continue to identify candidate law enforcement agencies to pilot test / implement electronic citation / summons arrest / warning processing,
10. Identify needs of candidate agencies for programming and other assistance,
11. Research/develop funding proposals to support candidate agencies as needed, and
12. Roll-out to candidate agencies.

Application:

Overview - Software; In-Car Equipment; Data Communications Network; Citation Forms/Zebra Printer; Summons Arrest Forms; Warning Tickets;

Rollout - # Printers; LE Agencies; Thermal Paper; Train-the-Trainer; Feedback from Pilot;

Mgmt Reports; Monthly by Officer; by Violation Type; by Location; Separate Data Set – Map Based Analysis;

Preparation for Each Agency; Equipment/Software in Vehicle; Regis ORI with e-Citation; Test System; Train Officers;

CRCOG Users/e-Citation/e-Summons/e-Warning; Windows Style Interface; Main Menu Functions;

New Citation / Summons / Warning; Event Search; Print; User Preferences; Clear Search Queues;

Process; Demographics; License/Vehicle; Specifics; Infractions/Fines; Notes; Preview; Sign-Save-Print;

Successes; User Accepts; App Sharing Across Jurisdictions; Potential for Other Mobile Ticket Apps; and Challenges; Budget Limits Broader Rollout; Towns Slow to Rollout “Seed” Units; Long Term Issue of Replacement Costs; Revenue Sharing to Cover Costs - Strong Potential.

Projected Budget by Funding Source:

Funding Source	2009	2010	2011	2012	2013	2014	2015
NHTSA 408	75,000	150,000	100,000	75,000			
NHTSA 405c					150,000	150,000	200,000
Match	19,000	37,500	25,000	19,000	37,500	37,500	50,000
Total Funds	94,000	187,500	125,000	94,000	187,500	187,500	250,000

Status:

The Electronic Citation / Summons / Warning Processing System will build on the Electronic Citation Processing System, which is creating efficiencies in several areas. The receipt of electronically captured citation data by the CIB, is leading to the data being automatically populated into the CIB automated system.

In Phase One, vendors for pilot site law enforcement agencies developed in-car electronic citation systems while the Judicial Branch defined hardware and transmission requirements that would allow information created in police vehicles to be received and processed by the Judicial Branch CIB. Officer handwriting was replaced by type-written characters, therefore eliminating entry errors. Fewer entry errors are resulting in less exception processing, which improves the timeliness of down stream processing transmissions to the Courts and the Department of Motor Vehicles (DMV).

In Phase Two, the Judicial Branch created the interface which allowed for the direct population of the electronic citation transmissions from law enforcement into the CIB automated processing system, further minimizing data entry, key stroke errors, and exception processing.

In Phase Three, the Judicial Branch implemented regional electronic dockets and also included commercial electronic citations, and the electronic viewing and disposition of citations in court locations. This phase also began the development of an e-Citation paperless courtroom with dedicated dockets for citations, enhancing the availability of electronic, self-pay opportunities.

In Phase Four, the Judicial Branch implemented a direct web interface between the CIB and the Cheshire Police Department pilot site.

In Phase Five, the focus shifted to 100 percent statewide integration of E-Citations, including:

- Continued enhancement and expansion of the web interface version to electronically receive traffic citation information from law enforcement agencies,
- Automatic storing of information in the CIB citation database, allowing the electronic production of citations,
- Extracts to law enforcement agencies of citation data to enable in house record keeping and reporting,
- Refined web product to interface with the DMV,
- Enhancements as requested by pilot police departments,

- Informational seminars for police departments on the options for participating in E-Citation Summons / Warning processing initiative,
- Printers for pilot police departments, and
- Scanning equipment and hardware as needed for the receipt of increased numbers of E-Citations at CIB.

Progress:

Activities have been completed and coordinated in conjunction with the DPS, CRCOG and CIDRIS initiatives.

As highlighted, in regards to recent pilot-testing involving State and Local law enforcement, progress includes:

- Prototype for e-Citation back-end process/system has been developed,
- System being developed as a real-time/web-based application,
- CIB still debugging production problems as they occur from DPS,
- CIB beginning development on streamlining the citation workflow. This involves taking the e-Citations received and automatically uploading them into the legacy system, and
- E-Pay component, a web-based automated system to electronically accept credit card payments for infractions and certain payable violations, allows violators to pay multiple tickets, rather than requiring individual transactions per ticket.

Interim Progress Report (submitted for 8th Year Project funding)

Based on an Interim Progress Report, submitted to NHTSA in 2013 for Section 405c application -

Connecticut's March 2013 **Determination of Measurable Progress by Connecticut** was based on:

The timeliness of the Citation/Adjudication database improved, as evidenced by the decrease, from 19.03 days during July-September 2012, to 15.61 days during October-December 2012, in the average number of days from citation issuance by the Connecticut State Police to entry of the citation record into the Centralized Infractions Bureau database. Because this improvement occurred within the 12 months immediately preceding the FY 2013 due date for applications for State Traffic Safety Information System Improvements Grants in FY 2013, it was determined to be a demonstration of current progress.

Electronic Charging / Citation / Warning / Summons Arrest**Project ID:** CT-P-00025**Core System:**

- Citation/Adjudication

Performance Area:

- Completeness
- Accuracy
- Timeliness

Project Title: Electronic Charging / Citation / Warning / Summons Arrest**Lead Agency:** Capitol Region Council of Governments**Partner Agencies:**

- State Judicial Department
- State Department of Transportation (ConnDOT)
- Traffic Records Coordinating Committee (TRCC)
- Connecticut State Police (CSP)
- Central Connecticut State University (CCSU)
- Connecticut Police Chief's Association (CPCA)

Project Director/Primary Contact:

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Project Description/Basis:

This project proposes to extend previous as well as current efforts on electronic document and data collection. Strategies include weaving paperless data transfer from point of data collection to final repository without intermediate human intervention. Learning from prior experience with ConnDOT's award winning e-citation collaboration and more recently with e-crash, we will extend field data collection to two additional enforcement means; e-warning tickets and e-summons notices. We believe these are the natural supplement to the prior information technology initiatives. Moreover, they round out the suite of enforcement data collection for the field police officer and relieve those officers of the burden of redundant data entry and the need for manual and multiple sets of forms. Our approach extends beyond the paper-centric notion of a single charging document and instead provides a single charging approach that correctly routes enforcement data to the correct storage and processing facility. In doing so, we propose to move further away from the legacy paper based systems of the prior century and closer to the connected mode of the 21st century.

The software applications developed in this project will reduce data input errors and improve the completeness of the collected data. It should also improve police officer efficiency by reducing the amount of time that officers spend collecting citation, summons and warning data and decrease the time it takes this data to be received by the appropriate State agency.

This project will also result in the development of a Traffic Law Enforcement Policy and Data Model. The introduction of mobile information technology to traffic law enforcement offers new opportunities for focused policy initiatives that might result in stronger sanctions on recurrent violators and greater attention to locations of frequent crashes and significant injuries. Moreover, it may be possible to improve traffic law enforcement by amending violation fees schedules in a way that treats the occasional offender with a modest sanction while the chronic violator might receive a graduated sanction. In addition, it may be possible to define frequent crash zones and increase sanctions for violators in those geographic areas. Finally, given the potential availability of expanded crash and violation data coupled with temporal and spatial analysis tools, the Connecticut General Assembly would have for the first time an innovative means of determining the following:

- Revenue required for administration and operation of the traffic law enforcement and adjudication system;
- Hazardous traffic violation true costs (using epidemiology research);
- Payment history, violator recidivism, and opportunities for improvement;
- Enforcement activity trends based on changes in fee amounts;
- Effectiveness of electronic printers in police vehicles;
- Reduction in crashes and crash severity based on sanction adjustments and investments in focused interventions on a hypothetical basis followed by a pilot program.

Background:

Police efficiency is substantially hampered by the inability to cite violators associated with crashes and selective enforcement in an automated fashion. Moreover, this presents a systemic challenge to the enforcement system in that it compels substantial and delayed ticket entry and disposition by the state's judicial system. While improvements can be incremental, an electronic citation system is best accomplished as a cradle to grave ticketing system involving all parties from the outset.

In conjunction with the leadership of the Traffic Records Coordinating Committee, the State of Connecticut Judicial Department initiated a pilot electronic citation program. This program has the support of the Department of Public Safety (DPS) and the Department of Transportation (ConnDOT) along with local law enforcement. In the past couple years; the Judicial Department has resolved issues regarding an electronic citation format and the paper document upon which the citation will be printed. Moreover, mobile printers and scanners have been identified and tested. While these may seem like small migratory tasks, they are vital steps toward the development of an all-electronic citation/adjudication system that will provide not only automated ticketing and docketing, but eventually full payment and Department of Motor Vehicles' (DMV) adjudication of the infractions.

Expected Outputs:

- Electronic warning ticket data collection and in-vehicle printing of notice to operators;
- Electronic summons process for serious motor vehicle violations and selected misdemeanor offenses and in-vehicle printing of the formal summons to the offender;
- Enhancement of e-citation data collection to include local ordinances so that the utility of the process for citing violators can be extended to assist municipal officers in meeting their local enforcement obligation; and
- All enforcement media will be fully integrated into the e-crash application.

Expected Impact:

Expected impacts include:

- Expand management information and targeted enforcement activities in equipped municipalities;
- Improved timeliness of the availability of citation, summons and warning data to the courts;
- Improved accuracy and completeness of collected and submitted data; and
- New opportunities for focused policy initiatives that might result in stronger sanctions on recurrent violators and greater attention to locations of frequent crashes and significant injuries.

At the end of this 9th year initiative, the baseline enforcement suite will be complete based on existing state policies. Assuming that ConnDOT is successful in its efforts to develop a functional geographic information system for the Connecticut user community, the state should be able to connect the dots of crash location and enforcement so that education and engineering improvements may be better targeted and planned. Collaboration and partnering must continue in order for our success to mature into an expectation rather than mere potential. The table will be set for improving those policies in ways that were not even possible just a few years ago. A connected Connecticut crash and enforcement system will mean a safer Connecticut.

Goals and Objectives:

Technical Objectives:

This project builds on prior investments of the State Department of Transportation (ConnDOT).

1. The electronic citation application provides the ability to:
 - Reference the motor vehicle statute files maintained by the Connecticut Judicial Department,
 - Swipe or scan operator license information from crash participants or violators,
 - Integrate DMV operator and registration information to the citation, and
 - Print a citation for the violator; forward an electronic citation to the Judicial Department's Central Infractions Bureau; and as an interim step, print a hard copy of the citation.
2. Using existing hardware and communications facilities, this system will provide a GPS reference on all electronic crash records, citations, summons arrests, and warnings.
3. Development of a Traffic Law Enforcement Policy and Data Model.

Critical path tasks for this project include:

1. Authorization and executive support to enable e-Summons and e-Warning from the Judicial Branch and the Department of Motor Vehicles;
2. Definition of functional requirements for each product via a Delphi approach involving subject matter experts;
3. Management reporting and application quality and integrity controls based on common or State cloud hosting;
4. Integration with existing applications including e-Citation and e-Crash;
5. Application architecture and detail design with options for connected and unconnected services;
6. Solicitation and selection of pilot communities as early adopters coupled with detailed gap analysis and product remediation; and
7. Development of real-time video based training coupled with availability of structured train the trainer sessions for each participating agency.

Traffic Law Enforcement Policy and Data Model:

Recruit/involve an experienced operations specialist to develop a Traffic Law Enforcement Policy and Data Model in conjunction with:

- Graduate students selected based on the following disciplines -
 - Traffic engineering
 - Criminal Justice
 - Operations Analysis
 - Geographic Information Systems
 - Public policy or public administration
- An oversight committee to provide leadership to the model development consisting of representatives from the following -
 - Central Connecticut State University Policy Group
 - Regional Police Chief's Association
 - Regional Planning Agency
 - Epidemiologist (Yale, Health/EMS)
 - NHTSA or FHWA (national crash data and associated costs)
 - GIS analyst for location analysis and costs per location
 - ConnDOT for crash causes by location
 - Judicial (CIB) for current trends in fines and payments
 - Law Enforcement (state and local) for impediments and inducements to citation enforcement
 - DMV for license based sanctions
 - Division of Criminal Justice for prosecutorial sensitivities
 - An ad hoc representative(s) from the General Assembly
- The outputs of the Policy and Data Model development would be in four (3 month) phases -
 - Phase one: Detailed mission and function of the group
 - Phase two: Design and specification of the model and its components
 - Phase three: Model development, testing, and tuning
 - Descriptive and prescriptive data output/products
 - Mini-pilot using New Britain and Hartford
 - Phase four: Training of model users and policy makers

Projected Budget by Funding Source:

Funding Source	2009	2010	2011	2012	2013	2014	2015
NHTSA 405c							150,000
Local Funds							37,500
Total Funds							187,500

Strategic Benefits: While extending the efforts from previous electronic document and data collection for both e-citation and e-crash, this initiative represents a new approach to enhance electronic field data collection for e-warning tickets and e-summons notices. The strategic benefits of the connected strategy for data collection and retrieval are significant. Errors are radically reduced, supervisory review is simplified and more easily facilitated, activity metrics can be near current, and data transfer is real time. This reduces the overall costs and increases system efficiency for the agencies upstream from the law enforcement organizations. In addition, the presence of real time data for charging violators and offenders opens the door to advanced policy options including stepped sanctions based on violator history or even by geographic location based on crash history. It may be possible to extend beyond mere electronic charging (citation, summons arrest, warning) to "smart charging" by hot spots based on spatial and temporal crash metrics.

Connecticut EMS Tracking and Reporting System Data Linkage

Project ID:

Core System:

- Injury Control

Performance Area:

- Integration

Project Title: Connecticut EMS Tracking and Reporting System Data Linkage

Lead Agency: Department of Public Health (DPH)

Partner Agencies:

- Department of Transportation (ConnDOT)
- Transportation Safety Research Center (TSRC)
- Connecticut Hospital Association

Project Director/Primary Contact:

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Project Description:

The focus of the Connecticut EMS Tracking and Reporting System Project is to establish the basis for linking motor vehicle crash, pre-hospital EMS, trauma and Connecticut Hospital Information and Management Exchange (CHIME) data leading to one record for each patient from the point of injury to the point of hospital discharge.

The CEMSTARS DL Project will lay the foundation for an integrated system that avoids unnecessary duplication of costs and personnel administration. By linking the records of the different agencies for each patient encounter, a complete picture can be created. Identifying priority needs based on this complete picture will enable better analysis of patient outcome in terms of mortality, injury, severity, and health care cost.

Basis for Project:

Previously, the Crash Outcome Data Evaluation System (CODES) Project had been working on similar goals but DPH has moved away from this project. The CEMSTARS DL Project will be used:

- To identify priority needs for improving pre-hospital care and patient outcomes;
- To support public health and traffic safety decision makers;
- To support public health and traffic safety legislation; and to educate the public.

Expected Impact:

Impact of linking Crash, EMS, Trauma and CHIME databases includes:

- Creating a complete picture of each patient encounter in one database;
- Increasing the use of integrated data to identify traffic safety problems, support traffic safety decision makers, support traffic safety legislation, and educate the public (previously a CODES Project goal); and
- Increasing accessibility to integrated data for DPH personnel and CEMSTARS DL Project partners to perform data analysis for public health and traffic safety.

Goals/Objectives:

The CEMSTARS DL Project's primary objective is to provide a basis for data linkage between Crash, EMS, Trauma, and CHIME databases.

CEMSTARS DL will be designed to foster and cultivate the integration of multi-agency databases, and facilitate participation in the CEMSTARS DL Project. NHTSA and DPH/OEMS will work together to:

1. Develop, implement and manage an integrated multi-stakeholder system leveraging necessary resources (time, money, personnel, and equipment) as needed;
2. Support the integration of multiple data sets to for public health and traffic safety using state-of-the-art software, equipment, and training;
3. Establish a foundation for data sharing with key stakeholders – NHTSA, DPH/OEMS, FARS, Highway Safety Office, TRCC, and other potential data users;
4. Create greater demand for CEMSTARS DL data by continuing to educate State government officials on the power, benefit and application of the CEMSTARS DL efforts in a “real world” context; and
5. Assess the medical and economic impact of injuries to develop State best practices and policy changes.

Tasks/Milestones:

- Submit/finalize HS-1 grant application to ConnDOT, Highway Safety Office;
- Identify agency stakeholders;
- Develop memorandums of understanding (MOU) from all agency stakeholders;
- Provide further detail for project timeline;
- Assess need for/acquire software development support;
- Develop and maintain a written general data release policy for use of the CEMSTARS DL data that is compatible with State confidentiality and data access policies;
- Develop and maintain written documentation of the linkage processes;
- Participate in special studies designed by NHTSA by contributing data specific to the study as coordinated by NHTSA; and
- Contribute, when feasible, by serving as mentors, trainers, and technical support to others in the CEMSTARS DL Project.

Projected Budget by Funding Source:

Funding Source	2009	2010	2011	2012	2013	2014	2015
NHTSA 405c							100,000
Local Funds							25,000
Total Funds							125,000

Project Status:

The following information was contained in an Interim Progress Report, submitted in March 2011 for the Section 408 application – Health care system databases linked to the crash database by the Department of Public Health (DPH).

Performance Measure used to track Improvements: Number and years of health care system databases linked to the crash database by the Department of Public Health (DPH) Crash Outcome Data Evaluation System (CODES) Project.

Improvements Achieved or Anticipated: Integration of the crash database to hospitalization and emergency department visit databases from 10 data years of linked data as of June 2010 to include an additional data year for hospitalization data and emergency department visit data as of March 2011.

Specification of how Measure is calculated: Number(s) of data years for hospitalization and emergency department visits linked through the CODES 2000 software.

Date and Baseline Value for the Measure:

Number of data years for hospitalization and emergency department visits linked as of June 2009

Dataset integrated with crash	Years linked	# of data years
Hospitalization	2002-2006	5
Emergency department visit	2002-2006	5
		Total = 10

Date and Current Value for the Measure:

Number of additional data years for hospitalization and emergency department visits linked as of March 2011

Dataset integrated with crash	Year linked	# of data years
Hospitalization	2007	1
Emergency department visit	2007	1
		Total = 2

Note: The DPH CODES Project has made progress in integrating hospitalization and emergency department visit data to the crash data. More data years are expected to be integrated. Additionally, the CODES Program is expected to add the integration of mortality data and emergency medical services (EMS) data to the crash data in future years.

Project Summaries / 10th Year (2015 – 2016)

Emphasis for traffic records system improvements continues with a focus on mobile reporting of traffic citation and motor vehicle crash data, in addition to electronic linkage of injury outcome data, tracking person specific crash and injury records from a crash event to emergency medical services, trauma, emergency department, and hospital information management and exchange.

Projects proposed by the TRCC for the 10th year Section 405c application include:

- Electronic Crash - Technology / Software Support for Local Law Enforcement
- Electronic Citation - Complete Installation Statewide for Local Law Enforcement
- Electronic Charging - Citation / Warning / Summons Arrest
- Electronic Processing - Citation / Warning / Summons Arrest
- Linking Crash / Injury Datasets - Measure Injury Outcomes Assessed by Health Care Providers
- Crash Data Repository (CDR) / Expand Functionality - Query Tools /Canned Output Reports
- Electronic EMS Tracking and Reporting System

Other projects suggested for consideration - refer to page 128

Electronic Crash - Technology / Software Support for Local Law Enforcement**Project ID:** CT-P-00016**Core System:**

- Crash
- Citation/Adjudication

Performance Area:

- Completeness
- Accuracy
- Timeliness
- Uniformity
- Linkage
- Accessibility

Project Title: Electronic Crash - Technology / Software Support / Local Law Enforcement**Lead Agency:** Capitol Region Council of Governments**Partner Agencies/Association:**

- Connecticut Department of Transportation
- State and Local Law Enforcement
- State Judicial Department
- Traffic Records Coordinating Committee (TRCC)

Project Director/Primary Contact:

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Project Description/Basis:

In January 2015, the State began the transition to a completely updated electronic crash reporting system using the MMUCC Guideline, 4th Edition as the basis for its crash data collection. This project encompasses multiple initiatives aimed at serving a segment of the law enforcement community. The focus is to help local police departments acquire public safety equipment. Some departments don't have computers or mobile data terminals (MDTs) in their vehicles, hindering their abilities for selective enforcement. Better tools/resources, including technology as well as software support where warranted, would enable local police departments to better implement new E-Crash investigation and enforcement initiatives.

Equipment as well as software support will be provided to support local law enforcement agencies in implementing E-Crash MMUCC PR-1. Equipment/software support will be specifically awarded to those

agencies requesting assistance for the purchase and installation of computers, printers, or other mobile technology, as well as software applications. Evaluating applications and making award decisions will be based on established criteria.

The need for planning and coordination among law enforcement agencies is critical to the success of this effort. This E-Crash support initiative will be interfaced with the ConnDOT/UConn Crash Data Repository (CDR). Electronic crash and citation reporting will reduce data input errors and improve the completeness of the collected data. It should also improve police officer efficiency by reducing the amount of time that officers spend collecting crash and citation data and decrease the time it takes this data to be received by the appropriate State agency.

Background:

The crash reporting system existing prior to January 2015 was based on the accident report form PR-1, which had been largely unchanged for more than twenty years. The legacy system had extensive mainframe based edits which were difficult to enforce in a manual environment. The old PR-1 form did not meet the recommendations of the National MMUCC Guideline.

Expected Impact:

- Expand management information and targeted enforcement activities in equipped municipalities;
- Improve timeliness, accuracy, completeness and availability of both crash and citation data; and
- Provide new opportunities for focused policy initiatives that might result in stronger sanctions on recurrent violators and greater attention to locations of frequent crashes and significant injuries.

Projected Budget by Funding Source:

Funding Source	2011	2012	2013	2014	2015	2016
NHTSA 405c						350,000
Local Funds						87,500
Total Funds						437,500

Project Status:

The need for planning and coordination with the 100% submission / assessment and support initiative for E-Citations is also critical as efforts to assess law enforcement agencies' capabilities, and their ability to adopt to E-Citations as well as E-Crash will be interrelated.

Electronic Citation - Complete Installation Statewide for Local Law Enforcement**Project ID:** CT-P-00009**Core System:**

- Citation/Adjudication
- Crash

Performance Area:

- Completeness
- Accuracy
- Uniformity
- Timeliness

Project Title: Electronic Citation - Complete Installation for Local Law Enforcement**Lead Agency:** State of Connecticut Judicial Branch – Court Operations, Centralized Infractions Bureau**Partner Agencies:**

- Connecticut Police Chief's Association (CPCA)
- State and Local Law Enforcement Agencies
- Connecticut Department of Transportation
- Traffic Records Coordinating Committee (TRCC)

Project Director/Primary Contact:

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Project Description:

The citation system in Connecticut was a manual system, vulnerable to human error. Information from handwritten tickets was data entered and subsequently transmitted to various entities. Exception processing was time consuming. An electronic method of creating tickets and populating the CIB database is leading to improved processing times and accuracy of the information processed.

This project is dedicated to completing the installation of e-Citation statewide for all local law enforcement agencies; and to begin phase-out of ticket books as P.D.s switch to the electronic format.

- Background - CIB; Unified Court System; 250 LE Agencies; 425,000 Tickets per Year; Lock Box Payment;
- Project Focus - Timeliness; Accuracy; Technical Agility to Respond to Public Policy Changes; Better Performance Measures;

- Manual Limitations - Ticket Inventory; Road Conditions; Legislative Change; Legibility; Arithmetic Errors;
- Timeframe - Analysis for Ticket Returns;
- Ticket Errors - Wrong Amount Due; Wrong Infraction Number; Wrong Amount for Infraction;
- Successes - Collaboration; Proof of Concept Widely Accepted; First Utilization of e-Signature Impetus for e-Pay/Plead; and
- Challenges - Broaden User Base; Demand for Multi-Uses for Mobile Printer; Crash Info Exchange, Summons, Parking Tickets, Warnings.

Project Tasks:

1. Identify additional candidate law enforcement agencies to implement E-Citation;
2. Identify agencies' needs for programming and other assistance;
3. Research/develop funding proposals to support agencies as needed;
4. Roll-out to additional candidates;
5. Identify late adopters and/or potential non-adopter law enforcement agencies;
6. Develop additional and alternative methods to support E-Citation solutions for late- and non-adopters;
7. Research/develop budget and timeline for aiding late- and non-adopter support for E-Citation solutions; and
8. Implement alternative solutions for the remaining law enforcement agencies.

Application:

Overview - Software; In-Car Equipment; Data Communications Network; Citation Forms/Zebra Printer;

Rollout - # Printers; LE Agencies; Thermal Paper; Train-the-Trainer; Feedback from Pilot;

Mgmt Reports; Monthly by Officer; by Violation Type; by Location; Separate Data Set – Map Based Analysis;

Preparation for Each Agency; Equipment/Software in Vehicle; Regis ORI with e-Citation; Test System; Train Officers;

CRCOG Users/e-Citation; Windows Style e-Citation Interface; Main Menu Functions;

New Citation; Citation Search; Print; User Preferences; Clear Search Queues;

Process; Demographics; License/Vehicle; Specifics; Infractions/Fines; Notes; Preview; Sign-Save-Print;

Successes; User Accepts; App Sharing Across Jurisdictions; Potential for Other Mobile Ticket Apps; and

Challenges; Budget Limits Broader Rollout; Towns Slow to Rollout "Seed" Units; Long Term Issue of Replacement Costs; Revenue Sharing to Cover Costs - Strong Potential.

Projected Budget by Funding Source:

Funding Source	2011	2012	2013	2014	2015	2016
NHTSA 408	100,000	75,000				
NHTSA 405c			150,000	100,000		150,000
Match	25,000	19,000	37,500	25,000		37,500
Total Funds	125,000	94,000	187,500	125,000		187,500

Status:

The Electronic Citation Processing System is creating efficiencies in several areas. The receipt of electronically captured citation data by the CIB, is leading to the data being automatically populated into the CIB automated system.

In Phase One, officer handwriting was replaced by type-written characters, therefore eliminating entry errors. Fewer entry errors are resulting in less exception processing, which improve the timeliness of down stream processing transmissions to the Courts and the Department of Motor Vehicles.

Phase Two, including activities allowing for direct population of the CIB database, further minimizes data entry, key stroke errors, and exception processing.

Phase Three will allow for the expansion of e-Citation processing, further developing the application to accommodate Commercial Citations, and the electronic viewing and disposition of citations in court locations. This phase will also begin the development of an e-Citation paperless courtroom with dedicated dockets for citations and will enhance the availability of electronic, self-pay opportunities.

Performance Measures

- Total tickets issued: 425,000
- Total tickets issued electronically: 45,000
- Total tickets entered electronically: 2,100
- Pre-Program: Average number of days from issuance to receipt – 28 days
- Pre-Program: Error rate – 11%
- Phase I: Average number of days from issuance to receipt – 4 days
- Phase I: Error rate – 5%
- Phase II: Average number of days from issuance to receipt – 4 days
- Phase II: Error rate – 1.5%
- Phase III: Average number of days from receipt to data entry – 7 per 1,000 tickets (anticipated)
- Phase III: Average number of minutes from receipt to data entry – 120 per 1,000 tickets “

Interim Progress Report (submitted for 8th Year Project funding)

Based on an Interim Progress Report, submitted to NHTSA - January 2013 for Section 405 application -

Connecticut's March 2013 **Determination of Measurable Progress by Connecticut** was based on:

The timeliness of the Citation/Adjudication database improved, as evidenced by the decrease, from 19.03 days during July-September 2012, to 15.61 days during October-December 2012, in the average number of days from citation issuance by the Connecticut State Police to entry of the citation record into the Centralized Infractions Bureau database. Because this improvement occurred within the 12 months immediately preceding the FY 2013 due date for applications for State Traffic Safety Information System Improvements Grants in FY 2013, it was determined to be a demonstration of current progress.

Electronic Charging / Citation / Warning / Summons Arrest**Project ID:** CT-P-00025**Core System:**

- Citation/Adjudication

Performance Area:

- Completeness
- Accuracy
- Timeliness

Project Title: Electronic Charging / Citation / Warning / Summons Arrest**Lead Agency:** Capitol Region Council of Governments**Partner Agencies:**

- State Judicial Department
- State Department of Transportation (ConnDOT)
- Traffic Records Coordinating Committee (TRCC)
- Connecticut State Police (CSP)
- Central Connecticut State University (CCSU)
- Connecticut Police Chief's Association (CPCA)

Project Director/Primary Contact:

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Project Description/Basis:

This project proposes to extend previous as well as current efforts on electronic document and data collection. Strategies include weaving paperless data transfer from point of data collection to final repository without intermediate human intervention.

Learning from prior experience with ConnDOT's award winning e-citation collaboration and more recently with e-crash, and e-traffic stop, we will extend field data collection to two additional enforcement means; e-warning tickets and initiate a framework for an entry in to the juvenile justice arena with e-juvenile summons notices. We believe these are the natural supplement to the prior information technology initiatives. Moreover, they round out the suite of enforcement data collection for the field police officer and relieve those officers of the burden of redundant data entry and the need for manual and multiple sets of forms.

Our approach extends beyond the paper-centric notion of a single charging document and instead provides a single charging approach that correctly routes enforcement data to the correct storage and processing facility. In doing so, we propose to move further away from the legacy paper based systems of the prior century and closer to the connected mode of the 21st century.

Benefits of a connected strategy for data collection and retrieval:

- Errors are radically reduced,
- Supervisory review is simplified, and more easily facilitated,
- Activity metrics can be near current,
- Data transfer is real time,
- Overall costs are reduced,
- System efficiency is increased for agencies upstream from the law enforcement organization,
- Provides real time data for charging violators and offenders, and
- Opens the door to advanced policy options, including stepped sanctions based on violator history, or by geographic location based on crash history.

It may be possible to extend beyond mere electronic charging (warning, citation, summons arrest) to “smart charging” by hot spots based on spatial and temporal crash metrics in much the same way as work zone violations.

Given the potential availability of expanded crash and violation data coupled with temporal and spatial analysis tools, the Connecticut General Assembly would have for the first time an innovative means of determining the following:

- Revenue required for administration and operation of the traffic law enforcement and adjudication system;
- Hazardous traffic violation true costs (using epidemiology research);
- Payment history, violator recidivism, and opportunities for improvement;
- Enforcement activity trends based on changes in fee amounts;
- Effectiveness of electronic printers in police vehicles;
- Reduction in crashes and crash severity based on sanction adjustments and investments in focused interventions on a hypothetical basis followed by a pilot program.

Background:

Police efficiency is substantially hampered by the inability to cite violators associated with crashes and selective enforcement in an automated fashion. Moreover, this presents a systemic challenge to the enforcement system in that it compels substantial and delayed ticket entry and disposition by the state's judicial system. While improvements can be incremental, an electronic citation system is best accomplished as a cradle to grave ticketing system involving all parties from the outset.

In conjunction with the leadership of the Traffic Records Coordinating Committee, the State of Connecticut Judicial Department initiated a pilot electronic citation program. This program has the support of the Department of Public Safety (DPS) and the Department of Transportation (ConnDOT) along with local law enforcement. In the past few years, the Judicial Department has resolved issues regarding an electronic citation format and the paper document upon which the citation will be printed. Moreover, mobile printers and scanners have been identified and tested. While these may seem like small migratory tasks, they are vital steps toward the development of an all-electronic citation/adjudication system that will provide not only automated ticketing and docketing, but eventually full payment and Department of Motor Vehicles' (DMV) adjudication of the infractions.

Expected Outputs:

- Electronic warning ticket data collection and in-vehicle printing of notice to operators,
- Enhancement of e-citation data collection to include local ordinances so that the utility of the process for citing violators can be extended to assist municipal officers in meeting their local enforcement obligation,
- All enforcement media fully integrated into the e-crash application,
- Certain application enhancements to e-Crash as requested by the user community, and
- Design of the juvenile summons procedure in electronic form with eventual extension to criminal summons procedure in conjunction with the Judicial Branch.

Assuming that ConnDOT is successful in its efforts to develop a functional geographic information system for the Connecticut user community, the state should be able to connect the dots of crash location and enforcement so that education and engineering improvements may be better targeted and planned. Collaboration and partnering must continue in order for our success to mature into an expectation rather than mere potential. The table will be set for improving those policies in ways that were not even possible just a few years ago. A connected Connecticut crash and enforcement system will mean a safer Connecticut.

Technical Objectives:

This project builds on prior investments of the State Department of Transportation (ConnDOT).

1. The electronic citation application provides the ability to:
 - Reference the motor vehicle statute files maintained by the Connecticut Judicial Department,
 - Swipe or scan operator license information from crash participants or violators,
 - Integrate DMV operator and registration information to the citation, and
 - Print a citation for the violator; forward an electronic citation to the Judicial Department's Central Infractions Bureau; and as an interim step, print a hard copy of the citation.
2. Using existing hardware and communications facilities, this system will provide a GPS reference on all electronic crash records, citations, summons arrests, and warnings.
3. Development of a Traffic Law Enforcement Policy and Data Model

Critical path tasks for this project include:

1. Authorization and executive support to enable e-Warning from the Judicial Branch and the Department of Motor Vehicles (approved);
2. Authorization and executive support to design the e-Summons procedure for juvenile matters from the judicial Branch;
3. Definition of functional requirements for each product;
4. Management reporting and application quality and integrity controls based on common or State cloud hosting;
5. Integration with existing applications including e-Citation and e-Crash;
6. Application architecture and detail design with options for connected and unconnected services; and
7. Further development of real-time video based training and support products associated with the CAPTAIN mobile data system, the CT:CHIEF records management crash, citation, e-warning, racial profiling, and potential e-juvenile summons procedure.

Projected Budget by Funding Source:

Funding Source	2011	2012	2013	2014	2015	2016
NHTSA 405c					150,000	150,000
Local Funds					37,500	37,500
Total Funds					187,500	187,500

Strategic Benefits: While extending the efforts from previous electronic document and data collection for both e-citation and e-crash, this initiative represents a new approach to enhance electronic field data collection for e-warning tickets and initiate a framework for an entry in to the juvenile justice arena with e-juvenile summons notices.

Electronic Processing - Citation / Warning / Summons Arrest**Project ID:** CT-P-00009**Core System:**

- Citation/Adjudication
- Crash

Performance Area:

- Completeness
- Uniformity
- Timeliness

Project Title: Electronic Processing - Citation / Warning / Summons Arrest**Lead Agency:** State of Connecticut Judicial Branch – Court Operations, Centralized Infractions Bureau**Partner Agencies:**

- Connecticut Police Chief's Association (CPCA)
- State and Local Law Enforcement Agencies
- Connecticut Department of Transportation
- Traffic Records Coordinating Committee (TRCC)
- Central Connecticut State University (CCSU)

Project Director/Primary Contact:

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Project Description:

Prior to the implementation of Electronic Citation (E-Citation) Processing, Connecticut's traffic violation citation system was completely manual; vulnerable to human error at many points in the process. Handwritten documents required multiple entry in numerous and varied systems causing inconsistencies and inaccuracies in data. This sometimes led to agencies that relied on the system, such as the Department of Motor Vehicles (DMV), receiving erroneous information, which in some cases resulted in a failure to consistently and accurately apply conviction information to driver history files. In addition to creating opportunities for inaccurate and conflicting data to be entered into the system, reliance upon handwritten citations and multiple points of data entry often resulted in processing delays and time consuming exceptions processing.

A statewide systematic effort was undertaken to address these problems, with the Judicial Branch E-Citation Processing System project developed in coordination with Citation projects involving the Capitol Region Council of Government (CRCOG) and the Department of Public Safety (DPS). This resulted in the development of a statewide electronic roadside data capture system for the issuing and reporting of traffic citations.

This project is dedicated to the continued development of an application that enables the receipt / availability of citation, juvenile summons notices, and warning data for the courts. The project serves as a complement to all law enforcement e-Charging pilot efforts statewide through ultimately building a back-end process for receiving and processing electronic traffic citations, juvenile summons notices, and warning tickets.

- Background - CIB; Unified Court System; 250 LE Agencies; 425,000 Tickets per Year; Lock Box Payment,
- Project Focus - Improved Timeliness; Accuracy; Technical Agility to Respond to Public Policy Changes; Better Performance Measures,
- Manual Limitations - Ticket Inventory; Road Conditions; Legislative Change; Legibility; Arithmetic Errors,
- Timeframe - Analysis for Ticket Returns,
- Ticket Errors - Wrong Amount Due; Wrong Infraction Number; Wrong Amount for Infraction,
- Successes - Collaboration; Proof of Concept Widely Accepted; First Utilization of e-Signature Impetus for e-Pay/Plead, and
- Challenges - Broaden User Base; Demand for Multi-Uses for Mobile Printer; Crash Info Exchange, Parking Tickets.

Goal:

Create an application that enables the Judicial Branch to electronically receive traffic citation, juvenile summons notices, and warning data from law enforcement agencies; automatically store, process and supply required information to the courts.

Objective: Design and implement an on-demand, centralized, web-based records management system (RMS) for law enforcement agencies to do the following:

- Query agency-specific data related to the issuance of citations, juvenile summons notices and warning tickets,
- Generate various reports related to agency activity in conjunction with the issuance of citations, etc., (e.g., by street, officer, charge and defendant),
- Provide for the management of data, such as approval process for citations, etc., prior to submission to CIB,
- Allow for cross-agency searching on citations, summons notices, and warnings,
- Allow agencies to export data in a variety of formats for use in spreadsheets and/or other applications, and

- Provide a web-service interface for querying of data by other applications.

Objective: Continue efforts to enable the e-citation / juvenile summons arrest / warning processing application to allow electronic viewing and disposition of required data in court locations.

Objective: Continue efforts to enable the e-citation / juvenile summons / warning application to provide a "paperless courtroom."

Purpose:

- Streamline citation / juvenile summons arrest / warning processing system process through applied technology,
- Increase revenue,
- Increase uniformity of event processing,
- Utilize staff more efficiently, and
- Assist law enforcement initiatives.

Tasks/Milestones:

1. Submit/finalize HS-1 grant application to ConnDOT, Highway Safety Office,
2. Production of electronic-citation / juvenile summons arrest / warning ticket data submitted by law enforcement resulting in automatic population into Judicial database,
3. Document volumes and define hardware/software needs,
4. Web services application,
5. Continued streamlining of CIB workflow,
6. Creation of more e-Infractions courts,
13. Continue coordination with CPCA in their assessment of law enforcement agencies' capabilities, current vendors, ability to adopt electronic citation / juvenile summons / warning ticket,
14. Continue to identify candidate law enforcement agencies to pilot test / implement electronic citation / juvenile summons arrest / warning processing,
15. Identify needs of candidate agencies for programming and other assistance,
16. Research/develop funding proposals to support candidate agencies as needed, and
17. Roll-out to candidate agencies.

Application:

Overview - Software; In-Car Equipment; Data Communications Network; Citation Forms/Zebra Printer; Summons Arrest Forms; Warning Tickets;

Rollout - # Printers; LE Agencies; Thermal Paper; Train-the-Trainer; Feedback from Pilot;

Mgmt Reports; Monthly by Officer; by Violation Type; by Location; Separate Data Set – Map Based Analysis;

Preparation for Each Agency; Equipment/Software in Vehicle; Regis ORI with e-Citation; Test System; Train Officers;

CRCOG Users/e-Citation/e-Summons/e-Warning; Windows Style Interface; Main Menu Functions;

New Citation / Juvenile Summons / Warning; Event Search; Print; User Preferences; Clear Search Queues;

Process; Demographics; License/Vehicle; Specifics; Infractions/Fines; Notes; Preview; Sign-Save-Print;

Successes; User Accepts; App Sharing Across Jurisdictions; Potential for Other Mobile Ticket Apps; and

Challenges; Budget Limits Broader Rollout; Towns Slow to Rollout "Seed" Units; Long Term Issue of Replacement Costs; Revenue Sharing to Cover Costs - Strong Potential.

Projected Budget by Funding Source:

Funding Source	2011	2012	2013	2014	2015	2016
NHTSA 408	100,000	75,000				
NHTSA 405c			150,000	150,000	200,000	150,000
Match	25,000	19,000	37,500	37,500	50,000	37,500
Total Funds	125,000	94,000	187,500	187,500	250,000	187,500

Status:

The Electronic Citation / Juvenile Summons / Warning Processing System will build on the Electronic Citation Processing System, which is creating efficiencies in several areas. The receipt of electronically captured citation data by the CIB, is leading to the data being automatically populated into the CIB automated system.

In Phase One, vendors for pilot site law enforcement agencies developed in-car electronic citation systems while the Judicial Branch defined hardware and transmission requirements that would allow information created in police vehicles to be received and processed by the Judicial Branch CIB. Officer handwriting was replaced by type-written characters, therefore eliminating entry errors. Fewer entry errors are resulting in less exception processing, which improves the timeliness of downstream processing transmissions to the Courts and the Department of Motor Vehicles (DMV).

In Phase Two, the Judicial Branch created the interface which allowed for the direct population of the electronic citation transmissions from law enforcement into the CIB automated processing system, further minimizing data entry, key stroke errors, and exception processing.

In Phase Three, the Judicial Branch implemented regional electronic dockets and also included commercial electronic citations, and the electronic viewing and disposition of citations in court locations. This phase also began the development of an e-Citation paperless courtroom with dedicated dockets for citations, enhancing the availability of electronic, self-pay opportunities.

In Phase Four, the Judicial Branch implemented a direct web interface between the CIB and the Cheshire Police Department pilot site.

In Phase Five, the focus shifted to 100 percent statewide integration of E-Citations, including:

- Continued enhancement and expansion of the web interface version to electronically receive traffic citation information from law enforcement agencies,
- Automatic storing of information in the CIB citation database, allowing the electronic production of citations,
- Extracts to law enforcement agencies of citation data to enable in house record keeping and reporting,
- Refined web product to interface with the DMV,
- Enhancements as requested by pilot police departments,
- Informational seminars for police departments on the options for participating in E-Citation, Juvenile Summons / Warning processing initiative,
- Printers for pilot police departments, and
- Scanning equipment and hardware as needed for the receipt of increased numbers of E-Citations at CIB.

Progress:

Activities have been completed and coordinated in conjunction with the DPS, CRCOG and CIDRIS initiatives.

As highlighted, in regards to recent pilot-testing involving State and Local law enforcement, progress includes:

- Prototype for e-Citation back-end process/system has been developed,
- System being developed as a real-time/web-based application,
- CIB still debugging production problems as they occur from DPS,
- CIB beginning development on streamlining the citation workflow. This involves taking the e-Citations received and automatically uploading them into the legacy system, and
- E-Pay component, a web-based automated system to electronically accept credit card payments for infractions and certain payable violations, allows violators to pay multiple tickets, rather than requiring individual transactions per ticket.

Interim Progress Report (submitted for 8th Year Project funding)

Based on an Interim Progress Report, submitted to NHTSA in 2013 for Section 405c application -

Connecticut's March 2013 **Determination of Measurable Progress by Connecticut** was based on:

The timeliness of the Citation/Adjudication database improved, as evidenced by the decrease, from 19.03 days during July-September 2012, to 15.61 days during October-December 2012, in the average number of days from citation issuance by the Connecticut State Police to entry of the citation record into the Centralized Infractions Bureau database. Because this improvement occurred within the 12 months immediately preceding the FY 2013 due date for applications for State Traffic Safety Information System Improvements Grants in FY 2013, it was determined to be a demonstration of current progress.

Linking Crash / Injury Datasets – Measure Injury Outcomes Assessed by Health Care Providers

Project ID: CT-P-00015

Core System:

- Crash
- EMS/Injury

Performance Area:

- Uniformity
- Accuracy
- Linkage

Project Title: Linking Crash / Injury Datasets – Measure Injury Outcomes Assessed by Health Care Providers

Lead Agency: Yale-New Haven Hospital

Partner Agencies:

- State Department of Transportation (ConnDOT)
- State and Local Law Enforcement
- University of Connecticut (UConn)
- Department of Public Health
- Traffic Records Coordinating Committee (TRCC)

Project Director/Primary Contact:

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Title: Manager, Injury Prevention and Research
Agency: Yale-New Haven Hospital & Yale-New Haven Children's Hospital

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Project Description/Basis:

The focus of this project is to integrate crash and injury data to derive more precise injury outcomes. In question – is the disparity between officer assessments of personal injury as recorded on the previous PR-1, prior to 2015; the new MMUCC PR-1 crash reporting system, which began on January 1, 2015 and actual outcomes assessed by health care providers. Project explores a data integration solution that provides more accurate injury severity information for persons involved in crashes. Steps include acquiring disparate datasets, performing linking functions, managing the resulting dataset, and conducting in-depth analyses on the linked data.

Officers using the PR-1 crash report, prior to 2015, recorded typical injury assessment based on the KABCO scale, a measure of the functional injury level of the victim at the crash scene.

Codes were selected based on the on-site judgment of the investigating police officer completing the crash report PR-1. Small explanations were provided in the Investigator's Guide for A, B and C – injuries.

- (K) Fatal Injury,
- (A) Incapacitating Injury (Prevents Return to Normal Activity)
- (B) Non Incapacitating Evident Injury
- (C) Possible Injury (Claim of Non-evident Injury)
- (O) Property Damage Only

The D16.1 Classification Manual of Motor Vehicle Traffic Accidents - was available, and also provided guidance using the KABCO scale, but it is unknown whether any law enforcement agencies in Connecticut ever used the D16.1 Manual. The following is an example of the detail provided by the D16.1 Manual for an (A) Injury, also referred to as an Incapacitating Injury.

(A) Incapacitating Injury: An incapacitating injury is any injury, other than a fatal injury, which prevents the injured person from walking, driving or normally continuing the activities the person was capable of performing before the injury occurred.

Inclusions: Severe laceration, broken or distorted limb, skull or chest injury, abdominal injury, unconsciousness at, or when taken from the accident scene, unable to leave the accident scene without assistance.

The MMUCC Guideline 4th Edition – was adopted by the State and has formed the basis for the development of the new MMUCC PR-1 crash reporting system. This new system was rolled out and began replacing the legacy PR-1 on January 1, 2015.

One of the areas the MMUCC Guideline emphasized in the update in 2012 from the previous Third Edition of MMUCC, was a revision to the KABCO attributes and definitions for Fatal, as well as A, B, and C injury types. Here is the comparable example of the detail provided in the MMUCC Guideline for an (A) Injury, referred to as a Suspected Serious Injury.

A **Suspected Serious Injury** is any injury other than fatal which results in one or more of the following:

- ✓ Severe laceration resulting in exposure or underlying tissues/muscle/organs or resulting in significant loss of blood
- ✓ Broken or distorted extremity (arm or leg)
- ✓ Crush injuries
- ✓ Suspected skull, chest or abdominal injury other than bruises or minor lacerations
- ✓ Significant burns (second and third degree burns over 10% or more of the body)
- ✓ Unconsciousness when taken from the crash scene
- ✓ Paralysis

Projected Budget by Funding Source:

Funding Source	2011	2012	2013	2014	2015	2016
NHTSA 408						
NHTSA 405c						50,000
Local Funds						12,500
Total Funds						62,500

Activities/Tasks:

- Submit / finalize HS-1 grant application with ConnDOT, Highway Safety Office;
- Meet with Highway Safety Office to finalize details of crash/injury integration/research efforts;
- Meet with/seek input from Data Integration Subcommittee of the TRCC;
- Determine which datasets to pursue, including previous legacy PR-1 crash data; new 2015 MMUCC PR-1 crash data; appropriate injury surveillance system (ISS) data;
- Sign appropriate research agreements to be able to protect/acquire appropriate data;
- Acquire disparate datasets;
- Make determinations of approach to linking different datasets;
- Perform data linkage between datasets;
- Manage the resulting dataset(s);
- Conduct in-depth analyses on the linked data;
- Present preliminary findings to TRCC/Highway Safety Office;
- Present findings/seek feedback to representatives of DPH/ISS system;
- Present findings/seek feedback to representatives from law enforcement
- Present final assessment/findings to Highway Safety Office

Crash Data Repository (CDR) / Expand Functionality – Query Tools / Canned Output Reports

Project ID: CT-P-00003

Core System: Crash

Performance Area:

Timeliness
Completeness
Accuracy
Uniformity
Integration
Accessibility

Project Title: Crash Data Repository (CDR) / Expand Functionality – Query Tools / Canned Output Reports

Lead Agency: University of Connecticut

Partner Agencies:

All stakeholder agencies listed on the Traffic Records Coordinating Committee

Project Director/Primary Contact:

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Project Description:

Expand CDR functionality, query tools/canned output reports for individual departments; trends/ranking in the state/crash factors; add functionality including GIS tools, allow for retrieval of geospatial data for DDACTS/other applications.

Basis for Project:

Analysis of highway safety is probably the most data-intensive activity carried out by highway and transportation agencies. It requires more than just archiving police accident reports. To be effective, information recorded on the accident reports must be captured into a searchable database. Roadway inventory, traffic volumes and even land use information are all critical for evaluating the safety of any road segment or intersection. These were added as part of phase 3 of the CTCDR. However, other safety analysis exercises require data such as driver history, motor vehicle registration information, and vehicle miles traveled (VMT).

Other institutional databases such as patient care reporting and treatment received on the scene and at the hospital are important to understanding the full impact of a crash. Due to the sensitive nature of these types of data, discussions need to take place early and often to identify the potential risks and benefits to such an integrated database. These types of discussions will be a key part of phase 3 of the CTCDR; so that a future version of the repository may include such linkages to allow for a complete crash analysis from time of impact to release from hospital for injury crashes.

Phase 1 and 2 of this project established a repository structure which provides users online access to these repositories through a common integrated portal. As part of the Crash Data Improvement Program (CDIP) review performed at ConnDOT in October of 2011, the need for performance measures was identified. These measures would track elements such as timeliness, completeness and accuracy. These tools will be built into the next generation of the CTCDR.

Phase 1 and 2 of this project provided users with access to the crash data. However, the data entered into the repository from ConnDOT is not timely. There is currently a 14 month backlog of paper PR-1 reports at the DOT. Phase 2 established an XML feed from DPS to get data into the repository in a more timely fashion. However, this feed only contains data from the state police. In an effort to get more data submitted electronically local police departments need the ability to submit data via an XML data feed. This will aid in eliminating the PR-1 paper backlog as well as providing users access to more timely data. The research team will pick 5 pilot towns at a minimum to aid in their submission of electronic PR-1 data. This would involve the research team assessing a local PDs current system and creating a custom application to generate an XML feed directly and securely to the crash data repository.

A recent initiative at the DOT is the transition to a 100% MMUCC compliant uniform police report. This initiative also includes an effort to move to 100% electronic reporting.

Vision for the Future:

Future advancements of the established repository will be proposed in subsequent years if funding is available. There are large amounts of non-highway information maintained by other State agencies such as the Department of Motor Vehicles or the Department of Public Health that could populate a fourth or fifth repository at UConn. Future phases of this research could work to link or merge the Patient Care Reporting (PCR) software and DMV driving records to the crash data repository. This would allow users access to not only crash data but limited generalized summaries of injury reports detailing the care provided to and the severity of the injuries to crash victims.

Users may also be able to generate summaries of crashes based on a driver's driving records obtained from the DMV. For example, this type of system would allow for analysis of a driver's DUI convictions and associated alcohol related crash frequency or potential. However, there are many privacy concerns with this type of data. Significant effort and resources will be needed to meet *Health Insurance Portability and Accountability Act (HIPAA)* requirements.

Expected Impact:

Completion of Phase 3 of this project will enhance the crash data repository created in Phase 1 and 2. This enhanced repository will provide members of the traffic-safety community with timely, uniform and complete crash data, within 30 days of the crash event, by expanding the data options in the repository established at the University of Connecticut. Furthermore, the integration of local police department xml data feeds will provide users with more timely data and aid in the reduction of the paper PR-1 backlog.

Projected Budget by Funding Source:

Funding Source	2011	2012	2013	2014	2015	2016
NHTSA 408	168,400	200,000				
NHTSA 405c						150,000
Match	42,100	50,000				37,500
Total Funds	210,500	250,000				187,500

Electronic EMS Tracking and Reporting System

Project ID:

Core System:

- Injury Control

Performance Area:

- Integration

Project Title: Electronic EMS Tracking and Reporting System

Lead Agency: Department of Public Health (DPH)

Partner Agencies:

- Department of Transportation (ConnDOT)
- Transportation Safety Research Center (TSRC)
- Connecticut Hospital Association

Project Director/Primary Contact:

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Project Description:

The Connecticut EMS Tracking and Reporting System project will focus on the basis for linking motor vehicle crash, pre-hospital EMS, trauma and Connecticut Hospital Information and Management Exchange (CHIME) data, laying the foundation for an integrated system, avoiding unnecessary duplication of costs and personnel administration. By linking the records of different agencies for each patient encounter, a complete picture can be created (one record for each patient from the point of injury to the point of hospital discharge). Identifying priority needs based on this complete picture will enable better analysis of patient outcome in terms of mortality, injury, severity and health care costs.

Basis for Project:

Previously, the Crash Outcome Data Evaluation System (CODES) Project had been working on similar goals but DPH has moved away from this project. CEMSTARS will be used:

- To identify priority needs for improving pre-hospital care and patient outcomes,
- To support public health and traffic safety decision makers, and
- To support public health and traffic safety legislation; and to educate the public.

Expected Impact:

Impact of linking Crash, EMS, Trauma and CHIME databases includes:

- Creating a complete picture of each patient encounter in one database;
- Increasing the use of integrated data to identify traffic safety problems, support traffic safety decision makers, support traffic safety legislation, and educate the public (previously a CODES Project goal); and
- Increasing accessibility to integrated data for DPH personnel and CEMSTARS partners to perform data analysis for public health and traffic safety.

Goals/Objectives:

CEMSTARS primary objective is to provide a basis for data linkage between Crash, EMS, Trauma, and CHIME databases.

CEMSTARS will be designed to foster and cultivate the integration of multi-agency databases, and facilitate participation in the CEMSTARS Project. NHTSA and DPH/OEMS will work together to:

1. Develop, implement and manage an integrated multi-stakeholder system leveraging necessary resources (time, money, personnel, and equipment) as needed;
2. Support the integration of multiple data sets to for public health and traffic safety using state-of-the-art software, equipment, and training;
3. Establish a foundation for data sharing with key stakeholders – NHTSA, DPH/OEMS, FARS, Highway Safety Office, TRCC, and other potential data users;
4. Create greater demand for CEMSTARS data by continuing to educate State government officials on the power, benefit and application of the CEMSTARS efforts in a “real world” context; and
5. Assess the medical and economic impact of injuries to develop State best practices and policy changes.

Tasks/Milestones:

- Submit/finalize HS-1 grant application to ConnDOT, Highway Safety Office;
- Identify agency stakeholders;
- Develop memorandums of understanding (MOU) from all agency stakeholders;
- Provide further detail for project timeline;
- Assess need for/acquire software development support;
- Develop and maintain a written general data release policy for use of the CEMSTARS DL data that is compatible with State confidentiality and data access policies;
- Develop and maintain written documentation of the linkage processes;
- Participate in special studies designed by NHTSA by contributing data specific to the study as coordinated by NHTSA; and
- Contribute, when feasible, by serving as mentors, trainers, and technical support to others in the CEMSTARS DL Project.

Projected Budget by Funding Source:

Funding Source	2011	2012	2013	2014	2015	2016
NHTSA 405c						100,000
Local Funds						25,000
Total Funds						125,000

Project Status:

The following information was contained in an Interim Progress Report, submitted in March 2011 for the Section 408 application – Health care system databases linked to the crash database by the Department of Public Health (DPH).

Performance Measure used to track Improvements: Number and years of health care system databases linked to the crash database by the Department of Public Health (DPH) Crash Outcome Data Evaluation System (CODES) Project.

Improvements Achieved or Anticipated: Integration of the crash database to hospitalization and emergency department visit databases from 10 data years of linked data as of June 2010 to include an additional data year for hospitalization data and emergency department visit data as of March 2011.

Specification of how Measure is calculated: Number(s) of data years for hospitalization and emergency department visits linked through the CODES 2000 software.

Date and Baseline Value for the Measure:

Number of data years for hospitalization and emergency department visits linked as of June 2009

Dataset integrated with crash	Years linked	# of data years
Hospitalization	2002-2006	5
Emergency department visit	2002-2006	5
		Total = 10

Date and Current Value for the Measure:

Number of additional data years for hospitalization and emergency department visits linked as of March 2011

Dataset integrated with crash	Year linked	# of data years
Hospitalization	2007	1
Emergency department visit	2007	1
		Total = 2

Note: The DPH CODES Project has made progress in integrating hospitalization and emergency department visit data to the crash data. More data years are expected to be integrated. Additionally, the CODES Program is expected to add the integration of mortality data and emergency medical services (EMS) data to the crash data in future years.

Other Project Summaries

Add Citation Dataset to the Crash Data Repository

Add Citation dataset to the Crash Data Repository (CDR); create query and summary report capabilities for authorized users; effort and agreements would be needed to ensure that data is transferred.

Allow for the Inclusion of All Fields of the MMUCC PR-1 to be Sent to the CDR

Establish security levels at the CDR to allow for the inclusion of all fields on the MMUCC PR-1 to be sent to the CDR to provide the potential to link with other traffic records files; establish criteria for authorized access to sensitive data; dependent on cooperation of others.

Tablet Computer Feasibility in Mobile Applications

Pilot project testing the feasibility of tablets to improve the efficiency of crash data collection in the field with the specific purpose of reducing processing times.

Laptops and Printers Linked to Software Applications of E-Crash and E-Citation

Purchase of laptops and printers linked to integrating e-crash and e-citation in the same vendor's software. Currently only two of the major eight vendors in the State appear to have this functionality,

Pilot Project with CIB to Fund Jurisdictions to Add E-Citation to their Software Applications

A pilot project with the CIB to fund selected vendors to add e-citation functionality to their software. Any project that funds a single agency only to upgrade its software would represent an inefficient use of Federal funds and an opportunity for any vendor to exploit the needs of a single agency,

Second Generation Fillable PDF Linked to Stand Alone E-Crash Application

Funding to build a second generation fillable PDF linked to a stand-alone e-crash application that can import driver and vehicle info, mapping functionality, and ability to capture GPS from an agency's CAD system or local Sierra modems. This would be for agencies without vendors and who have no ability to assume costs for e-crash maintenance and support

Assess Functionality of ConnDOT and Iowa ILTs; and RMS Generated Location utilized by the DPS

Assess functionality of ConnDOT's Incident Locator Tool (ILT); jointly with Iowa's ILT to determine the feasibility of a beta test using locally installed maps to add/integrate GPS coordinates with MMUCC PR-1

reporting. Assess/compare (accuracy) the RMS generated location field (X-Y) process, utilized by DPS and select Local LEAs. This would also apply to location field applied to e-Citations.

Conduct GIS Inventory of Estimated 80 Communities with Full Blown GIS Systems

Conduct an inventory of estimated 80 communities with full blown GIS systems; determine investments by towns, details of maps, compatibility; provide information to ConnDOT for their consideration in upcoming base map development/deployment efforts, as they reach out to the towns, regarding ConnDOT's effort.

Integrated Enterprise Base Map and Linear Referencing System

The Connecticut Department of Transportation (ConnDOT) has embarked on replacement of its Roadway Inventory System (RIS) with a more versatile integrated road network database that provides a common enterprise-wide spatial base map for mapping and GIS, and a common linear referencing system to track assets and performance along the network.

In Phase I, GIS, RIS, and Photolog network data were integrated and loaded into the Exor database, along with local road data from the federal government's TIGER data set.

The integrated enterprise base map and linear referencing system (IEBM-LRS) is needed to efficiently support core business applications. This integrated system (when completed) will have immediate business benefits for the roadway inventory, safety management, and design and construction branches, with significant future benefits for maintenance.

Phase II will provide an integrated statewide base map and linear referencing system that provides network location information for the State's motor vehicle crash data, generates mileage reports for state and local roads, provides a prototype RIS replacement system, and provides a recommendations report for Phase III. Phase II objectives include:

- Review and update data model for state maintained and local road network centerlines;
- Automate the match of local road information in RIS with TIGER and GIS spatial data;
- Load local road data currently stored in the RIS database into Exor database and match it to spatial data from TIGER or other spatial data sources;
- Create connectivity to state route where practical and without manual editing;
- Configure data model for key RIS road attribute and asset information; and
- Load road attribute and asset data from RIS into Exor database.

Phase III will replace the current RIS functionality, including Highway Performance Monitoring System (HPMS) reporting and integration with the ConnDOT ProjectWise environment. One of the considerations in the RIS upgrade is the Model Inventory of Roadway Elements (MIRE) guideline, promoted by the Federal Highway Administration (FHWA). At the completion of Phase III, RIS will be fully replaced by the new Exor system which will become the system of record for all information previously stored in RIS.

After Phase III, subsequent phases will include interfaces to bridge, crash, sign, maintenance, and other business areas. The integrated enterprise base map and linear referencing system (IEBM-LRS) project will give the State a highly detailed, accurate location coding method that could be used to integrate all roadway features and spatially codable events (e.g., crashes, citations, etc.) that happen on the roadways. This project will be beyond a simple shared base map, but serves that need as well – a way to locate spatially any event and then be able to link the data about that event with any other source of data that has been located on the same network.

There are several points of coordination between the IEBM-LRS project and other projects related to new or upgraded field data collection systems for law enforcement and analytic systems making use of linked roadway and law enforcement data. These include the Crash Data Repository (CDR), Data Driven Approach to Crime and Traffic Safety (DDACTS), and other projects undertaken by both State and Local law enforcement involving E-Crash and E-Citation data collection.

Impaired Driver Records Information System

Core System:

- Citation/Adjudication

Performance Area:

- Accuracy
- Uniformity
- Completeness
- Timeliness

Lead Agency: Criminal Justice Information System

Partner Agencies:

- State and Local Law Enforcement
- Department of Transportation (DOT)
- Department of Motor Vehicles (DMV)
- Department of Public Safety (DPS, now DESPP)
- Department of Information Technology (DOIT, now DAS-BEST)
- Division of Criminal Justice (DCJ)
- Judicial Branch
- National Highway Traffic Safety Administration (NHTSA)

Project Description/Basis:

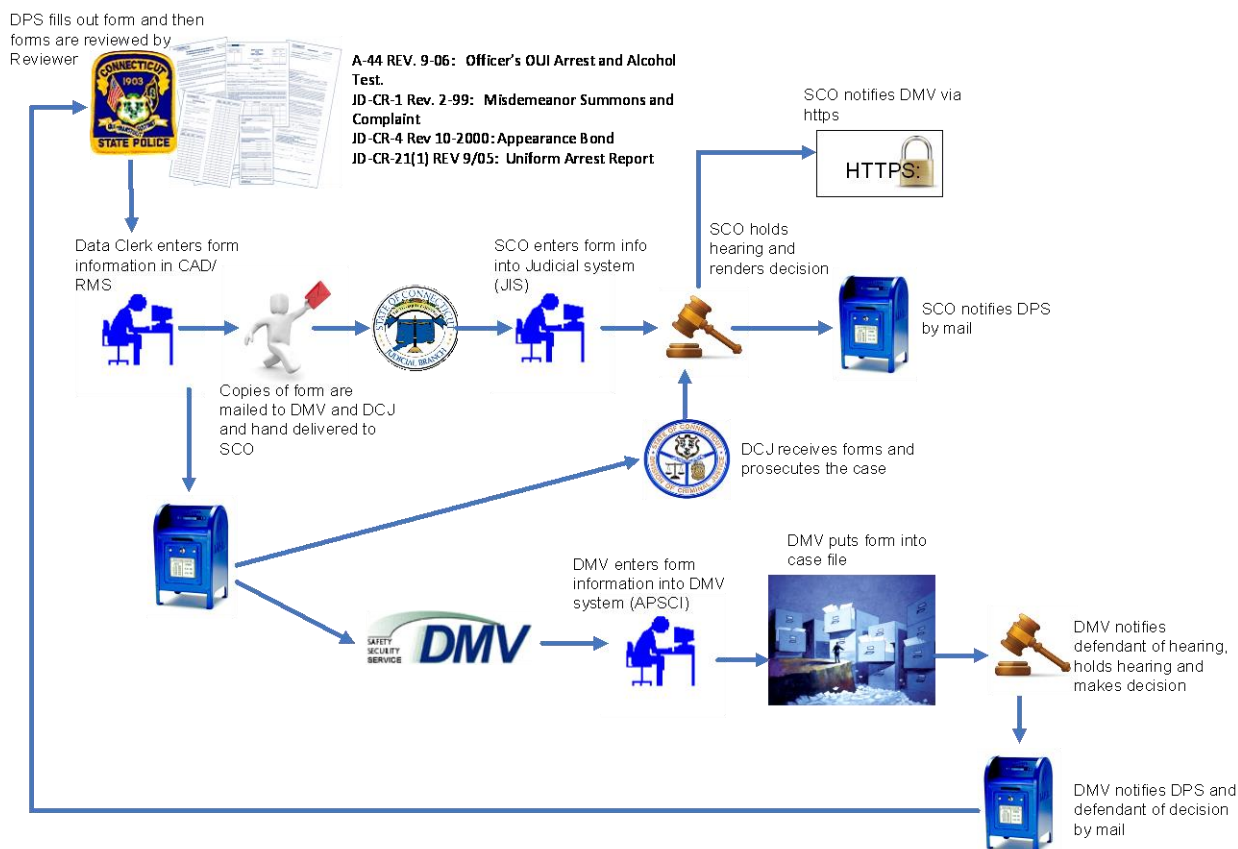
Current planning for the Connecticut Impaired Driver Records Information System (CIDRIS) includes electronic roadside data capture of traffic citations, integration/interface of Judicial and DMV information, integration/interface with offender-based data, and a data mart decision support system. The CIDRIS project will lead to more timely and accurate driver, vehicle and enforcement-adjudication data and a records management and tracking system enabling law enforcement, licensing and criminal justice agencies and others to better enforce, adjudicate and impose sanctions against impaired driving offenders.

Objectives:

1. Design and implement a comprehensive, statewide information technology system;
2. Facilitate the immediate, seamless and comprehensive sharing of information between all state agencies, departments, boards and commissions;
3. Appropriately identify, charge, and sanction intoxicated drivers, based on their driving history;

4. Manage impaired driving cases from arrest through the completion of court and administrative sanctions; and
5. Identify/target impaired driver populations and trends, address driving control system flaws, and evaluate countermeasures.

Current OUI Process



Project Status:

The implementation phase of CIDRIS, which began with the State Police, is expanding to include integration with local and municipal law enforcement. Efforts will be directed to installing the CIDRIS application on local RMS systems and creating an interface with the State's Criminal Information Sharing System (CISS). Priorities for integrating local systems with CIDRIS are based on local RMS system capabilities, number of DUI crashes and arrests, and past performance in high visibility DUI enforcement programs.

The quantity, as well as the accuracy, of "Operating under the Influence" (OUI) messages is steadily improving. Department of Emergency Services and Public Protection (DESPP) troopers and administrative clerks have been largely responsible for these initiatives. Future plans include use of the CJIS Forms Viewer, which will give authorized CIDRIS stakeholders the ability to view, retrieve, and print agency documents. Expansion of the CIDRIS program to the Division of Criminal Justice (DCJ) involves

the creation of a project charter to define the scope of work, necessary resources, and schedule to organize and execute CIDRIS program objectives.

The goal is to be able to manage impaired driving records so that stakeholders can access DUI information in real-time to reduce recidivism in impaired driving offenses.

Required Functionality

- Identify, charge, and sanction all impaired driving offenders;
- Manage impaired driving cases from arrest through the completion of court and administrative sanctions;
- Recognize geographic areas and trends, evaluate countermeasures, and identify problematic components of the overall impaired driving control system;
- Provide law enforcement and court personnel offender information to properly respond to offenses;
- Reduce administrative costs and increase efficiencies for dealing with impaired driving and at the same time address drivers with other types of impairments;
- Manage the workflow of all roadside citations issued from encounter through disposition;
- Maintain a full "chain of custody", including an audit trail, for all citation data captured. Need to be able to view changes to citations, by whom, when, and why citation was changed;
- Centralized decision support environment to track citation statistics and metrics for users such as Court Operations, CPCA, ConnDOT, DPS, and DMV; and
- Real-time based and 24x7 so that entries made at the roadside or desk are immediately available to all CIDRIS users.

Connecticut Integrated Vehicle and Licensing System (CIVLS)

Critical needs supporting DMV Mission being addressed – Solution will:

- **Improve timeliness and responsiveness** to Connecticut's citizens and DMV Stakeholders and Business Partners
- **Help streamline** the agency's business processes
- **Standardize and integrate** business and systems processes
- **Improve DMV operational efficiency** in performing key business processes and transactions
- **Modernize (all) agency-wide systems** and supporting technologies
- **Standardize** the agency's data

Proven solution, proven benefits, proven vendors

- Building on other states' experiences
- MOTS approach reduces risk, accelerates realization of benefits – Revenue improvements, Cost Savings, Benefits to all Constituents: Public, Stakeholders, State

Fixed price contract – approximately \$30M

Payback within 7-10 years (extremely conservative → based on Registration/Title only)

Schedule – 2010 – 2015

- Implementation addresses agency-wide needs
- Release 1 – Completed
 - Infrastructure (hardware, software, environments, network)
 - Customer Database
 - License/Manage Regulated Businesses
 - Certain Fiscal Functions
- Release 1A – Completed
 - Web-based infrastructure
- Release 2 – Registration and Title-related business scheduled for deployment in the fourth quarter 2014
- Release 3 – Credentialing and Sanctioning-related business scheduled for deployment in 2015

CIVLS Benefits

- Real time processing
- Internet and web portal for self service
 - Provide the customer the ability to “self-help” and check compliance issues at home
- Lead through processing (on-line) to reduce training requirements
- Enterprise-wide and integrated
- One customer centric database that will eliminate customer-related data errors

Connecticut DMV's Out of State Compact Notice Scanning and Data Entry System**Problem**

The Department of Motor Vehicles (DMV) receives around 3,000 Compact notices to Connecticut licensed drivers issued out-of-state each week. These Compact notices are sent via regular mail, on paper and in the format that is particular to the jurisdiction. This could be a single format used by an entire state or multiple formats for a single state going down to the county or court district level. In order to include these Compact notices on Connecticut driver records, each slip provided by states or jurisdictions needed to be reviewed and the data manually entered by DMV staff. This required a great deal of manual labor and often backlogs were experienced in this area.

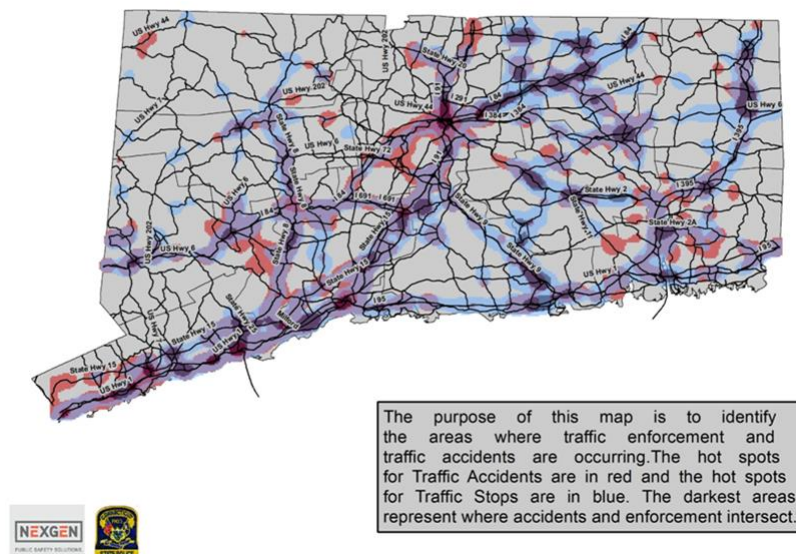
Solution

DMV developed an application whereby document imaging, Optical Character Recognition (OCR) and a manual review of data reduced the labor required greatly, eliminated the backlog *and* improved data entry accuracy. The application was developed by internal staff and uses an inexpensive imaging program along with inexpensive Kodak scanners. The programming of interfaces and the full process of receiving/scanning/reviewing/applying each Compact notice provided the greatest challenges to the project. Once that was complete, "zoning" each different infraction form became an ongoing process. By zoning, DMV can determine which data on the particular form should be recognized, extracted and populated in data fields. Each form has its own properties and requires individual attention. Once complete, however, this form is automatically recognized at any time in the future. Currently, the OCR system is programmed to receive the following states' Compact-related agreement notices: Delaware, Florida, Illinois, Hawaii, Iowa, Kentucky, Maryland, Michigan, New Jersey, New York, Ohio, Pennsylvania, Texas, Virginia, and Wisconsin.

Data Driven Approach to Crime and Traffic Safety (DDACTS)

- Initiative spearheaded by the Department of Emergency Services and Public Protection (DESPP)
- Troop F, August 2013 – 180 Motor Vehicle Crashes – 2,406 Traffic Stops

Hot Spot Map – Traffic Stops vs Motor Vehicle Crashes



- High intensity criminal enforcement program coupled with aggressive motor vehicle enforcement for the purposes of reducing crime and improving the quality of life within a specified area
- Focus for State and Local law enforcement agencies
- Utilize license plate reader technology
- Impact – large scale multi agency operation with a focus on motor vehicle contacts
- Priority – public support
- Priority – support from municipal and county elected officials
- Measure improvements in the data being collected and the timeliness of reporting accurate information
- Measure results – assaults, burglaries, vandalism, thefts from motor vehicles, larcenies, drug and narcotic violations, DUI arrests, motor vehicle crashes

CAD/RMS / E-Citation / E-Crash / DMV Commercial Vehicle Safety Division

The Commercial Vehicle Safety Division (CVSD) of the Department of Motor Vehicles (DMV) now utilizes electronic (e)citation and (e)crash reporting for all incidents involving commercial vehicles. Funded through the Federal Motor Carrier Safety Administration (FMCSA), the new system incorporates a computer aided dispatch and records management system (CAD/RMS). Previously, the CVSD relied on manual data entry (such as commercial vehicle-related citation information). This manual, non-automated process negatively impacted the quality and timeliness of commercial data being transmitted within the State's systems, e.g. Judicial, and ConnDOT. Although the CVSD has attained, and strives to maintain, a high quality data ranking by FMCSA, all divisions within the DMV continue to improve and enhance this quality to ensure timeliness and accuracy of all its data.

Focusing on e-citations, the CVSD estimates that the implementation, which included an e-citation printer for all sworn personnel in August 2013, saves the division \$50,000-60,000 per year in administrative costs. The added time savings for sworn personnel allows them additional time to perform enforcement activities. Accuracy of the e-citations is much better as the person and vehicle information comes from the computer files; statutory charges and fine amounts are accurate as they are pulled from a table provided by Judicial and addition errors are eliminated; e-citations arrive at Judicial in a timely manner and the legibility over the manual citations is much improved. In the first few months of implementation, the CVSD nearly doubled the number of infractions issued.

Driver License Bar Code Pilot

The Connecticut Driver License contains bar coded information. Provision to law enforcement of bar code scanning equipment and software would greatly facilitate collection of driver license data as well as improve the accuracy of the collected data. Use of this hardware and software would also improve the efficiency of the law enforcement officer collecting the data.

Regional Technology Conference

A day to day and a half Conference would provide the opportunity for TRCC stakeholders, including Executive Management to become better informed about the traffic records efforts in other states. Participants would have opportunities to attend sessions about existing and emerging technologies, including "best practices" from other states concerning traffic safety data collection, management and access. States have generally become more restrictive regarding out-of-state travel; and for traffic safety data collectors, managers and users, the Conference likely would be their only opportunity to become more up-to-date regarding methods and technologies that can improve the traffic records safety data system in Connecticut.

Other Project Suggestions

Crash/Citation/Incident law enforcement location analysis software accessible by each community

Public policy endorsement of adding e-mail addresses on DMV records for registrations and licenses

Data analysis software/all stakeholders

Acronyms used in Strategic Plan

AAMVA	American Association of Motor Vehicle Administrators
AASHTO	American Association of State Highway Transportation Officials
AADT	Annual Average Daily Traffic
ADT	Average Daily Traffic
ALS	Advanced Life Support
ANSI	American National Standards Institute
ASCII	American Standard Code for Information Exchange
ATSIP	Association of Transportation Safety Information Professionals (National TRCC)
BAC	Blood Alcohol Concentration
BLS	Basic Life Support
CAD	Computer Aided Dispatch
Captain	Capitol Region Total Access Information Network
CARE	Critical Analysis Reporting Environment
CAST	Connecticut Accident Summary Tables
CDC	Centers for Disease Control and Prevention
CDIP	Crash Data Improvement Program
CDLIS	Commercial Driver License Information System
CDR	Crash Data Repository
CEMSTARS	Connecticut EMS Tracking and Reporting System
CHA	Connecticut Hospital Association
CHIME	Connecticut Hospital Information and Management Exchange
CIB	Central Infractions Bureau
CIDRIS	Connecticut Impaired Driver Records Information System
CISS	Connecticut Information Sharing System
CIVLS	Connecticut Integrated Vehicle Licensing System
CJIS	Criminal Justice Information System
CMV	Commercial Motor Vehicle
CODES	Crash Outcome Data Evaluation System
COGCNV	Council of Governments of the Central Naugatuck Valley
COLLECT	Connecticut Online Law Enforcement Communications Teleprocessing
ConnDOT	Connecticut Department of Transportation
CPCA	Connecticut Police Chief's Association
CRCOG	Capitol Region Council of Governments
CRMVS	Criminal Record and Motor Vehicle System
CSAO	Chief State's Attorney's Office
CSP	Connecticut State Police
CT: Chief	Records Management System
CTI	Connecticut Transportation Institute
CVARS	Commercial Vehicle Analysis Reporting System
CVISN	Commercial Vehicle Information Systems Network
CVSD	Commercial Vehicle Safety Division
CVSP	Commercial Vehicle Safety Plan
DAS BEST	Department of Administrative Services Bureau of Enterprise Systems and Technology
DCJ	Division of Criminal Justice
DDACTS	Data Driven Approach to Crime and Traffic Safety
DESPP	Department of Emergency Services & Public Protection
DLN	Driver's License Number
DMV	Department of Motor Vehicles
DoIT	Department of Information Technology

DOT	Department of Transportation
DPS	Department of Public Safety
DPH	Department of Public Health
DRN	Digital Roadway Network
DUI	Driving Under the Influence
ED	Emergency Department
EMS	Emergency Medical Services
EMT	Emergency Medical Technician
FARS	Fatality Analysis Reporting System
FDE	Fundamental Data Elements
FHWA	Federal Highway Administration
FIPS	Federal Information Processing Standard
FMCSA	Federal Motor Carrier Safety Administration
FTP	File Transfer Protocol
GHSA	Governor's Highway Safety Association
GIS	Geographic Information System
GPS	Global Positioning System
GSA	General Services Administration
GVWR/GCWR	Gross Vehicle Weight Rating/Gross Combination Weight Rating
HIPAA	Health Insurance Portability and Accountability Act
HPMS	Highway Performance Monitoring System
HSO	Highway Safety Office
HSP	Highway Safety Plan
HTML	Hypertext Markup Language
IDRIS	Impaired Driver Records Information System
ILT	Incident Location Tool
IPR	Interim Progress Report
ISS	Injury Surveillance System
IT	Information Technology
JAD	Joint Application Development
JIS	Judicial Information System
JUD	Judicial Branch
LEA	Law Enforcement Agency
LEL	Law Enforcement Liaison
LRS	Linear Reference System
MAP-21	Moving Ahead for Progress in the 21 st Century Act
MCMIS	Motor Carrier Management Information System
MCSAP	Motor Carrier Safety Action Program
MDT	Mobile Data Terminal
MIRE	Model Inventory of Roadway Elements
MMUCC	Model Minimum Uniform Crash Criteria
MOTS	Modified Off the Shelf
MOU	Memorandum of Understanding
NCIC	National Crime Information Center
NCSA	National Center for Statistics and Analysis
NDR	National Driver Register
NHTSA	National Highway Traffic Safety Administration
NIEM	National Information Exchange Model
NEMSIS	National Emergency Medical Services System
NLETS	National Law Enforcement Telecommunications System
NMVTIS	National Motor Vehicle Title Information System
OBTS	Offender Based Tracking System
OCR	Optical Character Recognition
OEMS	Office of Emergency Medical Services
OPM	Office of Policy and Management

OUI	Operating Under the Influence
PCR	Patient Care Reporting
PDF	Portable Document Format
PDO	Property Damage Only
PDPS	Problem Driver Pointer System
PI&E	Public Information & Education
PR-1	Police Crash Report
PR-2	Supplemental Report for Fatal Crashes
PRISM	Performance and Registration Information Systems Management
PSDN	Public Safety Data Network
RMS	Records Management System
RPO	Regional Planning Organization
SAFETEA	Safe, Accountable, Flexible and Efficient Transportation Equity Act
SHSP	Strategic Highway Safety Plan
SLOSSS	Suggested List of Surveillance Study Sites
SPR	State Planning and Research
SQL	Structured Query Language
SSN	Social Security Number
SWRPA	South Western Regional Planning Agency
TAC	Technical Advisory Committee
TASR	Traffic Accident Surveillance Report
TAVS	Traffic Accident Viewing System
TCAS	Traffic Citation Adjudication System
TRA	Traffic Records Assessment
TRAA	Traffic Records Assessment Advisory
TraCS	Traffic and Criminal Software System
TRIPRS	Traffic Records Improvement Program Reporting System
TRS	Traffic Records System
TRSP	Traffic Records Strategic Plan
TRCC	Traffic Records Coordinating Committee
TSIS	Traffic Safety Information System
TSRC	Transportation Safety Research Center
UAR	Uniform Arrest Record
UConn	University of Connecticut
VIN	Vehicle Identification Number
VMT	Vehicle Miles Traveled
WWW	World Wide Web
XML	eXtensible Markup Language

Endnotes – Users of traffic crash information; participants in National Traffic Records Forum; TRCC stakeholders; National Crash Reporting (MMUCC) Guideline; PR-1 data element review; uploading electronic PR-1s to the ConnDOT crash server; uploading of electronic commercial vehicle crash data to SafetyNet; EMS services utilizing NEMSIS data; CARE data analysis software; Crash data repository and the National Information Exchange Model.

¹ National Emergency Medical Services Information System

² Model Minimum Uniform Crash Criteria

³ TRCC stakeholders include representatives, who remain fairly active in attending meetings and participating in the decision making of the committee, and advisors, whose input to the TRCC is vital, but who are unable to participate as actively as others.

⁴ Use of the MMUCC Guideline is voluntary. The 3rd Edition of the Model Minimum Uniform Crash Criteria (MMUCC) Guideline was updated in 2008.

⁵ The State TRCC adopted the 4th Edition (2012) of the MMUCC Guideline as the basis for transitioning to a completely updated electronic crash reporting system beginning in January 2015.

⁶ Comparison of MMUCC data elements contained on legacy PR-1 and ConnDOT database, prior to 2015, and MMUCC data elements contained on new MMUCC PR-1 and Crash Data Repository at UConn, beginning January 1, 2015.

⁷ Much of the crash data collected by State and local law enforcement agencies is stored on local servers. Whether the data are collected in hard copy or electronically, hard copies of the report are mailed or faxed to ConnDOT. One of the most important objectives of the TRCC is the development and implementation of a procedure that allows PR-1 crash reports to be electronically uploaded from local and CSP servers to the ConnDOT crash file server.

⁸ Commercial Vehicle Analysis Reporting System (CVARS) project – In 2006, the Connecticut State Police (CSP) began the electronic capture and transfer of PR-1 crash reports to the Commercial Vehicle Safety Division (CVSD) within the Department of Motor Vehicles for subsequent upload to SafetyNet.

⁹ The Gold Compliance rating means that all EMS services must use the 400+ elements in the NEMSIS 2.2.1 Data Dictionary, with full XML compliance built into the software.

¹⁰ CARE a public domain, user-friendly analytical procedure that facilitates analysis of crash data. CARE was developed with NHTSA funding.

¹¹ CHIME – Connecticut Hospital Information and Management Exchange data

¹² The concept of a Crash Data Repository was proposed by the TRCC in 2006 and in 2007; however, due to the lack of a sponsoring agency each year, the proposal failed. In 2009, the Department of Public Safety (DPS) offered to serve as the lead agency for the development of a Crash Data Repository, but then had to decline.

¹³ Note: Actual “Yes Memo” was attached to the March 2013 Section 405 Application.